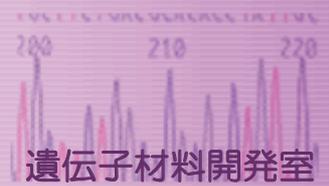


RIKEN BIORESOURCE CENTER
DNA BANK



遺伝子材料リソースリスト

Animal

Plant

Cell

DNA

JCM

Info

遺伝子材料リソースリスト (Resources Provided by the RIKEN DNA Bank)

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遺伝子材料リソースリスト

(Resources Provided by the RIKEN DNA Bank)

遺伝子材料開発室では、国内ならびに海外で作製されたプラスミド、ライブラリー、組換えアデノウイルスなど遺伝子材料の寄託を受け、品質管理の後に利用者に提供しています。収集した遺伝子材料は、各寄託者が独自に開発し、研究で実際に使用されたものであり、市販の遺伝子材料には無いユニークなものが多数あります。

ウェブカタログには遺伝子材料検索のためのページを準備していますので、目的のクローンを探す際にご利用ください。

1. 遺伝子導入、遺伝子発現のための材料

(Resources for gene introduction & expression)

遺伝子材料開発室では、遺伝子導入のための骨格ベクターならびに各種ベクターに遺伝子が搭載され、即実験に利用可能な遺伝子材料を提供しています。

(1) GFP リソース

http://dna.brc.riken.jp/en/gfp_resourceen.html

理化学研究所バイオリソースセンター(理研 BRC)は 2011 年 7 月 12 日に GE Healthcare Bio-Sciences 社(GE 社)の厚意によって、green fluorescent protein (GFP)及びその変異体遺伝子が組み込まれたバイオリソース(GFP リソース)について、ライセンス料なしで、当センターへのご寄託、当センターから大学及び国公立の研究機関(独立行政法人を含む)の非営利・学術研究への提供が可能となりました。是非、活発なご利用をお願い申し上げます。

GFP リソースのうち、京都大学武藤誠先生から寄託していただいた pRBS-EGFP (RDB 8039)は RBPJ 認識配列を持つレポーターで、Notch シグナルを可視化するために利用できます (Sonoshita et al., 2011, Cancer Cell 19, 125-137.)。埼玉大学脳科学融合研究センター中井淳一先生から寄託していただいた pN1-G-CaMP (RDB 6750)はカルシウムセンサーとして利用できます (Nakai et al., 2001, Nature Biotechnology 19, 137-141)。東京薬科大学濱田洋文先生から寄託していただいた pCAEGFP (RDB 3006)、アデノウイルス AxCAEGFP-Fwt (RDB 3944)は、遺伝子導入実験のコントロールとして利用できません。

| Cat. # | Name | Running title | Type |
|----------|---------|---------------------------------------|-----------|
| RDB 3006 | pCAEGFP | Expression vectoe of jellyfish GFP | DNA clone |
| RDB 3956 | pCAEGFP | Expression vector of EGFP | DNA clone |
| RDB 7631 | pCAEGFP | Expression vector of GFP driven by CA | DNA clone |

| Cat. # | Name | Running title | Type |
|----------|-----------------------|---|------------------------|
| | | promoter | |
| RDB 6071 | pCMFlag_EGFP | Expression vector of GFP, with FLAG-tag, control vector | DNA clone |
| RDB 7071 | pdxEFlag_EGFPit2 | Expression vector of EGFP | DNA clone |
| RDB 7073 | pdxEFlag_EGFPit2 | Expression vector of EGFP | DNA clone |
| RDB 6747 | pN1-G-CaMP | Genetically-encoded fluorescent calcium sensor cDNA | DNA clone |
| RDB 6748 | pN1-G-CaMP1.3 | Genetically-encoded fluorescent calcium sensor cDNA | DNA clone |
| RDB 6749 | pN1-G-CaMP1.6 | Genetically-encoded fluorescent calcium sensor cDNA | DNA clone |
| RDB 6750 | pN1-G-CaMP2 | Genetically-encoded fluorescent calcium sensor cDNA | DNA clone |
| RDB 8039 | pRBS-EGFP | Rbpj-binding sequence containing reporter GFP plasmid | DNA clone |
| RDB 3985 | pRxhrGFP | Shuttle vector to generate recombinant retrovirus expressing GFP | DNA clone |
| RDB 7884 | pUPAT-egfp3ic | Gene trapping vector of mouse embryonic stem cell | DNA clone |
| RDB 7885 | pUPAT-SRV | Gene trapping vector of mouse embryonic stem cell | DNA clone |
| RDB 6232 | pxCALNLEYFP | Expression vector of EYFP | DNA clone |
| RDB 3343 | AxCAEGFP (forward) | Recombinant adenovirus harboring enhanced green fluorescent protein cDNA | Recombinant adenovirus |
| RDB 3010 | AxCAEGFP-F/RGD | Recombinant adenovirus expressing jellyfish GFP | Recombinant adenovirus |
| RDB 3946 | AxCAEGFP-F40S | Recombinant adenovirus expressing EGFP | Recombinant adenovirus |
| RDB 3939 | AxCAEGFP-F40STAA | Recombinant adenovirus expressing EGFP | Recombinant adenovirus |
| RDB 3944 | AxCAEGFP-Fwt | Recombinant adenovirus expressing EGFP | Recombinant adenovirus |
| RDB 3347 | AxCALNLEGFP (forward) | Recombinant adenovirus harboring enhanced green fluorescent protein cDNA | Recombinant adenovirus |
| RDB 1727 | Ax1 CA gfp | Recombinant adenovirus expressing green fluorescent protein | Recombinant Adenovirus |
| RDB 1705 | pAx1-CA-gfp | Recombinant adenoviral vector expressing green fluorescent protein (GFP) gene | ShuttleVector |
| RDB 3224 | pAxCABFP (forward) | Shuttle vector for rAd harboring blue fluorescent protein cDNA | ShuttleVector |
| RDB 3225 | pAxCABFP (reverse) | Shuttle vector for rAd harboring blue fluorescent protein cDNA | ShuttleVector |
| RDB 5815 | pAxCAEGFP | Shuttle vector to generate rAd harbouring jerry fish GFP | ShuttleVector |
| RDB 3232 | pAxCAEGFP (forward) | Shuttle vector for rAd harboring enhanced green fluorescent protein cDNA | ShuttleVector |
| RDB 3233 | pAxCAEGFP (reverse) | Shuttle vector for rAd harboring enhanced green fluorescent protein cDNA | ShuttleVector |
| RDB 3943 | pAxCAEGFP-Fwt | Shuttle vector to generate rAd expressing EGFP | ShuttleVector |

| Cat. # | Name | Running title | Type |
|----------|------------------------|---|---------------|
| RDB 5817 | pAxCAEGFPit2 | Shuttle vector to generate rAd harbouring jerry fish GFP | ShuttleVector |
| RDB 3234 | pAxCAEYFP (forward) | Shuttle vector for rAd harboring enhanced yellow fluorescent protein cDNA | ShuttleVector |
| RDB 3251 | pAxCALNLBFP (forward) | Shuttle vector for rAd harboring blue fluorescent protein cDNA | ShuttleVector |
| RDB 3252 | pAxCALNLBFP (reverse) | Shuttle vector for rAd harboring blue fluorescent protein cDNA | ShuttleVector |
| RDB 3259 | pAxCALNLEGFP (forward) | Shuttle vector for rAd harboring enhanced green fluorescent protein cDNA | ShuttleVector |
| RDB 3260 | pAxCALNLEGFP (reverse) | Shuttle vector for rAd harboring enhanced green fluorescent protein cDNA | ShuttleVector |
| RDB 3261 | pAxCALNLEYFP (forward) | Shuttle vector for rAd harboring enhanced yellow fluorescent protein cDNA | ShuttleVector |
| RDB 3262 | pAxCALNLEYFP (reverse) | Shuttle vector for rAd harboring enhanced yellow fluorescent protein cDNA | ShuttleVector |
| RDB 5819 | pAxEFEGFPit2 | Shuttle vector to generate rAd harbouring jerry fish GFP | ShuttleVector |
| RDB 7060 | pAxEFlag_EGFPit2 | Shuttle vector to generate recombinant adenovirus | ShuttleVector |
| RDB 7062 | pAxEFlag_EGFPit2 | Shuttle vector to generate recombinant adenovirus | ShuttleVector |

(2) HLA cDNA クローン

<http://dna.brc.riken.jp/en/GENESETBANK/HLA.html>

HLA クラス I ならびにクラス II 遺伝子を掲載しています。特に、日本人に頻度の高い HLA クラス I 抗原をコードする cDNA クローン(愛知県がんセンター研究所、赤塚美樹博士より寄託)は、発現ベクターに組込まれており、遺伝子導入実験に即利用可能です。

Akatsuka Y. *et al.* (2007) *Cancer Science* 98 (8): 1139-1146.

Nishida T. *et al.* (2004) *Br. J. Haematol.* 124 (5): 629-635.

Akatsuka Y. *et al.* (2003) *J. Exp. Med.* 197 (11): 1489-1500.

Akatsuka Y. *et al.* (2002) *Tissue Antigens*, 59 (6): 502-511.

Akatsuka Y. *et al.* (2002) *Transplantation*, 74: 1773-1780.

Ando H. *et al.* (1993) *Hum Immunol.* 36 (2): 76-80

Senju S. *et al.* (1992) *Immunogenetics* 36 (5): 319-325.

Zemmour J. & Parham P. (1991) *Tissue Antigens* 37 (4): 174-180. Erratum in: *Tissue Antigens* 40 (5): 221-228.

Fujisawa K. *et al.* (1991) *Eur J Immunol.* 21 (10): 2341-2347.

Kamikawaji N. *et al.* (1991) *J Immunol.* 146 (8): 2560-2567.

Tamaki J. (1992) *Hokkaido J. Med. Sci.* 67 (5): 583-594. (in Japanese)

Nishimura Y. *et al.* (1990) *J Immunol.* 1990 Jul 1;145(1):353-60.

Takata H. *et al.* (1988) *Immunogenetics* 28 (4): 265-270.

(3) SEREX cDNA クローン

<http://dna.brc.riken.jp/ja/SEREXja.html>

癌患者で高発現している遺伝子を SEREX (serological analysis of cancer antigens by recombinant cDNA expression cloning) 法により選別し、クローン化しています。SEREX 法とは癌患者から摘出した癌組織から直接 mRNA を抽出し作製した発現 cDNA ライブラリーから癌患者の血清を用いて癌抗原を検索する方法で、同定された癌抗原に関するデータも公開されています。発現ベクターに組込まれており、遺伝子導入実験に即利用可能です。Ludwig institute for Cancer Research, 愛知県がんセンター研究所、並びにバイオリソースセンターより寄託されました。

小幡裕一ら, *Biotherapy* 16, 433-440 (2002)

Obata Y. *et al.* (2000) *Cancer Chemother Pharmacol.* 46, S37-42.

Obata Y. *et al.* (1999) *Breast Cancer* 6, 305-311.

(4) Full CDS Expression Vector Collection

http://dna.brc.riken.jp/en/RDB5956_2en.html

遺伝子材料開発室に寄託されているクローンならびに培養細胞株から得た cDNA 断片を発現ベクターに組込んだクローンを構築して提供しています。組込んだ cDNA 全長の塩基配列の確認ならびに当該ベクターを Cos-1 細胞に導入し、ウエスタンブロッティングあるいは免疫染色によるタンパク質産生の確認の後に提供リストに加えています。

List of Cloned Genes

| Gene of insert | Gene of insert | Gene of insert |
|--|------------------------------------|---|
| Human ATF1 | Human CREB2; ATF2 | Human CREB2; ATF4 |
| Human BACH2 | Human BAD | Human BATF |
| Human BIN1, transcript variant 9, Amphiphysin II | Human BIRC5/API4 | Human CAMK1 |
| Human CAMK1G | Human CAMK2B, transcript variant 2 | Human CCNA2/Cyclin A2 |
| Human CCNB2/Cyc B2 | Human CCNH/Cyc H | Human CEBPB/NF-IL-6 |
| Human CEBPE | Human GPE1BP | Human CREB3 |
| Human CREB3L1/Oasis | Human CREB3L2 | Human CREB3L3/CREB-H |
| Human CREBL1 | Human CXADR/CAR | Human DBP |
| Human CHOP10 | Human E2F2 transcription factor 2 | Human E2F transcription factor 4, p107/p103-binding |
| Human E2F8 | Human ELK1 | Human ELK4/Sap-1 |
| Human ERR alpha | Human ETS2 | Human ETV4/PEA3 |
| Human FLI-1 | Human FOS | Human Fra1; FOSL1 |
| Human Fra2; FOSL2 | Human GATA1 | Human GATA2 |

| Gene of insert | Gene of insert | Gene of insert |
|--|--|--|
| Human GATA3 | Human growth differentiation factor 3 (GDF3) | Human HDAC6 |
| Human hypoxia-inducible factor 1 alpha subunit (HIF1A) | Human HLF | Human IFNGR1/IFN-GRalpha |
| Human IL1B/IL-1 beta | Human IL2RG/IL-2R gamma | Human IL3RA/IL-3R alpha |
| Human IL6 | Human IL8 | Human ILF2/NF-AT, 45kDa |
| Human INS | Human JDP2 | Human c-jun/v-jun avian sarcoma virus 17 oncogene homolog |
| Human KLF4 | Human Prostate specific antigen | Human LIN28 |
| Human KRML; MAFB | Human MAFF | Human MAFG |
| Human MAFK | Human c-Myc | Human c-Myc (alternative translation initiations from an upstream) |
| Human MYCL | Human Nanog | Human NFE2 |
| Human NRF1; NFE2L1 | Human NRF2; NFE2L2 | Human NRF3; NFE2L3 |
| Human E4BP4 | Human NFKB1 | Human NFKB2 |
| Human NFKBIA/IkappaB alpha | Human NR0B1/DAX1;ACH | Human NR0B2/SHP |
| Human NR1D1/Rev-ErbA-alpha | Human NR1D2/Rev-Erb beta; RVR | Human NR1H2/LXR beta |
| Human NR1H4/FXR | Human NR1I3/CAR | Human NR2C2/TR4 |
| Human NR2C2/hTAK1, TR4 variant | Human NR4A2/NURR1 | Human NR5A1/SF-1; AD4BP |
| Human NR6A1/GCNF | Human NRL | Human NUDT21/CPSF5/CPSF25 |
| Human Oct3/4 isoform1 | Human Oct3/4 isoform2 | Human PPARA/PPAR alpha |
| Human PPARD/PPAR delta | Human PTEN1 | Human RAR alpha |
| Human ROR alpha | Human ROR beta | Human RXR alpha |
| Human RXR beta | Human MADH2/SMAD2 | Human SMAD3 |
| Human SRY (sex determining region Y)-box 15 | Human Sox2 | Human STAT1 |
| Human STAT2 | Human STAT6 | Human TEF |
| Human TFDP2/DP-2 | Human THOC4/ALY | Human THR3B/TR beta; ErbA-beta |
| Human tumor protein p53 | Human XBP1 | Human HCF-binding transcription factor Zhangfei |
| Human REX1; zinc finger protein 42 homolog | E. coli lacZ (beta-D-galactosidase) | Jellyfish GFP |

(5) RIKEN *S. pombe* ORFeome Clone Set

http://dna.brc.riken.jp/ja/yoshidayeast_ja.html

S. pombe ORFeome Clone は理研吉田化学遺伝学研究室で作製され、吉田稔先生(理研吉田化学遺伝学研究室)より寄託していただいたもので、酵母 (*Schizosaccharomyces pombe*) ORF クローン約 4800 株の genomic DNA クローンから構成されています。各々のクローンは、一株ごとに 1.5 ml プラスチックチューブに保存しています。

さらに、このクローンを有効に利用するための発現ベクターが充実しており、目的遺伝子をさまざまなタグと融合して発現することができます。

Schizosaccharomyces pombe ORFeome clones were deposited by Dr. Minoru

Yoshida, Chemical Genetics Laboratory, RIKEN; These consists of 4,900 entry clones. Furthermore, backbone vectors to construct expression vectors are collected. Individual clones are available.

Matsuyama A. *et al.* (2006) *Nature Biotech.*, 24, 841-847.

(6) セルロース系バイオマス分解酵素遺伝子クローン

<http://dna.brc.riken.jp/en/biomass.html>

セルロース系バイオマスの分解に関与する酵素をクローニングベクターならびに大腸菌発現ベクターに組み込んだクローンです。

| Gene | RDB no. | Name of Clone | |
|--------|----------|----------------------|---|
| abf1 | RDB 8141 | pBSII_Tr-abf1 | Plasmid clone of <i>Trichoderma reesei</i> arabinosidase |
| agl2 | RDB 8142 | pBSII_Tr-agl2 | Plasmid clone of <i>Trichoderma reesei</i> alpha-galactosidase 2 |
| agl3 | RDB 8143 | pBSII_Tr-agl3 | Plasmid clone of <i>Trichoderma reesei</i> alpha-galactosidase 3 |
| bgl1 | RDB 8136 | pBSII_Tr-bgl1 | Plasmid clone of <i>Trichoderma reesei</i> beta-D-glucoside glucohydrolase 1 |
| bgl1 | RDB 8291 | pET21c_Tr-bgl1-His | Expression vector of beta-D-glucoside glucohydrolase 1 of <i>Trichoderma reesei</i> |
| bgl1 | RDB 8311 | pET25b_Tr-bgl1-His | Expression vector of beta-D-glucoside glucohydrolase 1 of <i>Trichoderma reesei</i> |
| bxl1 | RDB 8140 | pBSII_Tr-bxl1 | Plasmid clone of <i>Trichoderma reesei</i> beta-xylosidase 1 |
| cbh1 | RDB 8131 | pBSII_Tr-cbh1 | Plasmid clone of <i>Trichoderma reesei</i> exoglucanase 1 |
| cbh1 | RDB 8286 | pET21c_Tr-cbh1-His | Expression vector of Exoglucanase 1 of <i>Trichoderma reesei</i> |
| cbh1 | RDB 8306 | pET25b_Tr-cbh1-His | Expression vector of Exoglucanase 1 of <i>Trichoderma reesei</i> |
| cbh2 | RDB 8132 | pBSII_Tr-cbh2 | Plasmid clone of <i>Trichoderma reesei</i> exoglucanase 2 |
| cbh2 | RDB 8287 | pET21c_Tr-cbh2-His | Expression vector of Exoglucanase 2 of <i>Trichoderma reesei</i> |
| cbh2 | RDB 8307 | pET25b_Tr-cbh2-His | Expression vector of Exoglucanase 2 of <i>Trichoderma reesei</i> |
| cel5b | RDB 8147 | pBSII_Tr-cel5b | Plasmid clone of <i>Trichoderma reesei</i> endoglucanase Cel5b |
| cel5b | RDB 8296 | pET21c_Tr-cel5b-His | Expression vector of Endoglucanase Cel5b of <i>Trichoderma reesei</i> |
| cel5b | RDB 8316 | pET25b_Tr-cel5b-His | Expression vector of Endoglucanase Cel5b of <i>Trichoderma reesei</i> |
| cel61b | RDB 8148 | pBSII_Tr-cel61b | Plasmid clone of <i>Trichoderma reesei</i> endoglucanase Cel61b |
| cel61b | RDB 8297 | pET21c_Tr-cel61b-His | Expression vector of Endoglucanase Cel61b of <i>Trichoderma reesei</i> |
| cel61b | RDB 8317 | pET25b_Tr-cel61b-His | Expression vector of Endoglucanase Cel61b of <i>Trichoderma reesei</i> |
| cel74a | RDB 8149 | pBSII_Tr-cel74a | Plasmid clone of <i>Trichoderma reesei</i> endoglucanase Cel74a |
| cel74a | RDB 8298 | pET21c_Tr-cel74a-His | Expression vector of Endoglucanase Cel74a of <i>Trichoderma reesei</i> |
| cel74a | RDB 8318 | pET25b_Tr-cel74a-His | Expression vector of Endoglucanase Cel74a of <i>Trichoderma reesei</i> |

| Gene | RDB no. | Name of Clone | |
|------|----------|--------------------|---|
| cip1 | RDB 8145 | pBSII_Tr-cip1 | Plasmid clone of <i>Trichoderma reesei</i> cip1 |
| cip2 | RDB 8146 | pBSII_Tr-cip2 | Plasmid clone of <i>Trichoderma reesei</i> cip2 |
| egl1 | RDB 8133 | pBSII_Tr-egl1 | Plasmid clone of <i>Trichoderma reesei</i> endoglucanase EG-I |
| egl1 | RDB 8288 | pET21c_Tr-egl1-His | Expression vector of Endoglucanase EG-I of <i>Trichoderma reesei</i> |
| egl1 | RDB 8308 | pET25b_Tr-egl1-His | Expression vector of Endoglucanase EG-I of <i>Trichoderma reesei</i> |
| egl2 | RDB 8134 | pBSII_Tr-egl2 | Plasmid clone of <i>Trichoderma reesei</i> endoglucanase EG-II |
| egl2 | RDB 8289 | pET21c_Tr-egl2-His | Expression vector of Endoglucanase EG-II of <i>Trichoderma reesei</i> |
| egl2 | RDB 8309 | pET25b_Tr-egl2-His | Expression vector of Endoglucanase EG-II of <i>Trichoderma reesei</i> |
| egl3 | RDB 8135 | pBSII_Tr-egl3 | Plasmid clone of <i>Trichoderma reesei</i> endoglucanase EG-III |
| egl3 | RDB 8290 | pET21c_Tr-egl3-His | Expression vector of Endoglucanase EG-III of <i>Trichoderma reesei</i> |
| egl3 | RDB 8310 | pET25b_Tr-egl3-His | Expression vector of Endoglucanase EG-III of <i>Trichoderma reesei</i> |
| egl5 | RDB 8150 | pBSII_Tr-egl5 | Plasmid clone of <i>Trichoderma reesei</i> endoglucanase EG-5 |
| egl5 | RDB 8299 | pET21c_Tr-egl5-His | Expression vector of Endoglucanase EG-5 of <i>Trichoderma reesei</i> |
| egl5 | RDB 8319 | pET25b_Tr-egl5-His | Expression vector of Endoglucanase EG-5 of <i>Trichoderma reesei</i> |
| swo1 | RDB 8144 | pBSII_Tr-swo1 | Plasmid clone of <i>Trichoderma reesei</i> swollenin |
| swo1 | RDB 8295 | pET21c_Tr-swo1-His | Expression vector of swollenin of <i>Trichoderma reesei</i> |
| swo1 | RDB 8315 | pET25b_Tr-swo1-His | Expression vector of swollenin of <i>Trichoderma reesei</i> |
| xyn1 | RDB 8137 | pBSII_Tr-xyn1 | Plasmid clone of <i>Trichoderma reesei</i> xylanase 1 |
| xyn1 | RDB 8292 | pET21c_Tr-xyn1-His | Expression vector of Endo-1,4-beta-xylanase 1 (Xylanase 1) of <i>Trichoderma reesei</i> |
| xyn1 | RDB 8312 | pET25b_Tr-xyn1-His | Expression vector of Endo-1,4-beta-xylanase 1 (Xylanase 1) of <i>Trichoderma reesei</i> |
| xyn2 | RDB 8138 | pBSII_Tr-xyn2 | Plasmid clone of <i>Trichoderma reesei</i> xylanase 2 |
| xyn2 | RDB 8293 | pET21c_Tr-xyn2-His | Expression vector of Endo-1,4-beta-xylanase 2 (Xylanase 2) of <i>Trichoderma reesei</i> |
| xyn2 | RDB 8313 | pET25b_Tr-xyn2-His | Expression vector of Endo-1,4-beta-xylanase 2 (Xylanase 2) of <i>Trichoderma reesei</i> |
| xyn3 | RDB 8139 | pBSII_Tr-xyn3 | Plasmid clone of <i>Trichoderma reesei</i> xylanase III |
| xyn3 | RDB 8294 | pET21c_Tr-xyn3-His | Expression vector of xylanase III of <i>Trichoderma reesei</i> |
| xyn3 | RDB 8314 | pET25b_Tr-xyn3-His | Expression vector of xylanase III of <i>Trichoderma reesei</i> |

(7) RIKEN *T. thermophilus* H8 Expression and Disruption Plasmids

http://dna.brc.riken.jp/ja/thermus_ja.html

理研放射光科学総合研究センター及び大阪大学の倉光成紀先生より寄託していただいたもので、高度好熱菌 (*Thermus thermophilus* HB8) の「高度好熱菌丸ごと一匹プロジェクト」から産み出された構造解析用タンパク質発現用プラスミドおよび遺伝子破壊株作製

用プラスミドのクローンセットです利用可能なタンパク質発現プラスミドならびに遺伝子破壊株作製用プラスミドは、理研放射光科学総合研究センターが提供するデータベース (http://www.thermus.org/j_index.htm) から検索することができます。

Thermus thermophilus HB8 (JCM 10941T) 菌株はBRC-JCMから、ゲノムDNAは、当開発室から入手可能です。

Thermus thermophilus HB8 expression plasmids were constructed by "Whole-Cell Project of a Model Organism, *Thermus thermophilus* HB8" (<http://www.thermus.org/>) and deposited by Dr. Seiki Kuramitsu, SR System Biology Research Group, RIKEN Harima Institute.

The gene disruptant of *T. thermophilus* HB8 can be easily prepared by adding this plasmid into the culture medium. The target gene in this plasmid was replaced by the thermostable kanamycine resistant gene. The length of the homologous region outside of the target gene is about 500 bp (only 10 bp of the target gene are left in both sides). *Thermus thermophilus* HB8 (JCM 10941T) strain and its genomic DNA are available from BRC-JCM and Gene Engineering Division, respectively.

Yokoyama *et al.* (2000) Nature Struct. Biol. 7, 943-945

(8) Empty Vector

<http://dna.brc.riken.jp/en/resource220en.html>

国内外の研究者により構築され、理研バイオリソースセンターに寄託された遺伝子発現用ベクターです。

Expression Vector of *Bacillus stearothermophilus*

| Cat. # | Name | Running title |
|----------|--------|--|
| RDB 919 | pSTE12 | Bacillus stearothermophilus shuttle vector |
| RDB 2728 | pSTE33 | Bacillus stearothermophilus shuttle vector |

Expression Vector of *E. coli*

| Cat. # | Name | Running title |
|----------|-------------|--|
| RDB 1911 | Lambda GEX5 | Cloning vector |
| RDB 6084 | pETEG5 | Expressing recombinant protein, T7 promoter |
| RDB 6211 | pT7Tet1 | Expression vector, bacterial |
| RDB 6212 | pT7Tet6 | Expression vector, bacterial |
| RDB 7041 | pETHFFc | Expression vector, bacterial, with His- and FLAG-tag |

| Cat. # | Name | Running title |
|----------|---------|---|
| RDB 7050 | pETF | Expression vector, bacterial, with FLAG-tag |
| RDB 7051 | pT7FCam | Expression vector, bacterial, with FLAG-tag |

Expression Vector in Mammalian Cells

| Cat. # | Name | Running title |
|----------|---------------|---|
| RDB 1379 | pH2Rneo | Expression vector with simian virus 40 (SV40) early promoter |
| RDB 1674 | pCALNLw | A cassette to introduce cDNA into mammalian chromosome |
| RDB 1679 | pCALwL | A cassette plasmid to insert cDNA into downstream CAG promoter |
| RDB 1862 | pCALNL5 | A cassette to introduce cDNA into mammalian chromosome |
| RDB 1968 | pBMSA | Expression vector, inducible promoter |
| RDB 2478 | pCEAGpolyA | mammalian expression vector driven by human CEA promoter |
| RDB 2546 | pxCAG | Expression vector driven by CAG promoter |
| RDB 3043 | pMNSM | Retrovirus expression vector in eukaryotic cells |
| RDB 2136 | S-HA-pRc/CMV | Expressing HA-tagged fusion protein, CMV promoter |
| RDB 2137 | S-T7-pRc/CMV | Expressing T7-tagged fusion protein, CMV promoter |
| RDB 2138 | D-T7-pRc/CMV | Expressing a fusion protein tagged with duplicated T7, CMV promoter |
| RDB 2139 | D-HA-pRc/CMV | Expressing a fusion protein tagged with duplicated HA, CMV promoter |
| RDB 2140 | S-Myc-pRc/CMV | Expressing Myc-tagged fusion protein, CMV promoter |
| RDB 2141 | D-Myc-pRc/CMV | Expressing a fusion protein tagged with duplicated Myc epitopes, CMV promoter |
| RDB 5954 | pCMV_S-Myc | Expressing Myc-tagged fusion protein, CMV promoter |
| RDB 5955 | pCMV_D-Myc | Expressing a fusion protein tagged with duplicated Myc epitopes, CMV promoter |
| RDB 5956 | pCMV_S-FLAG | Expressing FLAG-tagged fusion protein, CMV promoter |

Expression Vector of *S. cerevisiae*

<http://dna.brc.riken.jp/en/RDB1947en.html>

| Cat. # | Name | Running title | Tag | Replication Ori | Marker | Promoter |
|----------|--------|---|-----|-----------------|--------|----------|
| RDB 1947 | pAMH10 | E. coli - <i>S. cerevisiae</i> shuttle vector | Myc | centromere-type | HIS3 | ADH1 |
| RDB 1948 | pAMH20 | E. coli - <i>S. cerevisiae</i> shuttle vector | Myc | 2micron | HIS3 | ADH1 |
| RDB 1949 | pAML10 | E. coli - <i>S. cerevisiae</i> shuttle vector | Myc | centromere-type | LEU2 | ADH1 |
| RDB 1950 | pAML20 | E. coli - <i>S. cerevisiae</i> shuttle vector | Myc | 2micron | LEU2 | ADH1 |
| RDB 1951 | pAMT10 | E. coli - <i>S. cerevisiae</i> shuttle vector | Myc | centromere-type | TRP1 | ADH1 |

| Cat. # | Name | Running title | Tag | Replication Ori | Marker | Promoter |
|----------|--------|--|-----|-----------------|--------|----------|
| RDB 1952 | pAMT20 | E. coli - S. cerevisiae shuttle vector | Myc | 2micron | TRP1 | ADH1 |
| RDB 1953 | pAMU10 | E. coli - S. cerevisiae shuttle vector | Myc | centromere-type | URA3 | ADH1 |
| RDB 1954 | pAMU20 | E. coli - S. cerevisiae shuttle vector | Myc | 2micron | URA3 | ADH1 |
| RDB 1955 | pGMH10 | E. coli - S. cerevisiae shuttle vector | Myc | centromere-type | HIS3 | GAL1-10 |
| RDB 1956 | pGMH20 | E. coli - S. cerevisiae shuttle vector | Myc | 2micron | HIS3 | GAL1-10 |
| RDB 1957 | pGML10 | E. coli - S. cerevisiae shuttle vector | Myc | centromere-type | LEU2 | GAL1-10 |
| RDB 1958 | pGML20 | E. coli - S. cerevisiae shuttle vector | Myc | 2micron | LEU2 | GAL1-10 |
| RDB 1959 | pGMT10 | E. coli - S. cerevisiae shuttle vector | Myc | centromere-type | TRP1 | GAL1-10 |
| RDB 1960 | pGMT20 | E. coli - S. cerevisiae shuttle vector | Myc | 2micron | TRP1 | GAL1-10 |
| RDB 1961 | pGMU10 | E. coli - S. cerevisiae shuttle vector | Myc | centromere-type | URA3 | GAL1-10 |
| RDB 1962 | pGMU20 | E. coli - S. cerevisiae shuttle vector | Myc | 2micron | URA3 | GAL1-10 |

Expression Vector of *S. pombe*

http://dna.brc.riken.jp/en/yoshidayeast_3en.html

上記 URL のウェブサイトならびに RIKEN *S. pombe* ORFeome Clone Set の項をご覧ください。

2. 組換えウイルス産生用シャトルベクター

(Shuttle Vector for Recombinant Viruses)

<http://dna.brc.riken.jp/rvd/adenoja.html>

組換えアデノウイルスを産生するためのベクター(シャトルベクター)です。本クローンを HEK293 等 E1 遺伝子を保有する細胞株に導入することにより、組換えウイルスを得ることができます。(搭載遺伝子による細胞毒性等の理由から、組換えウイルスを産生できない場合があります)。

産生した組換えアデノウイルスも当開発室から提供可能です。本カタログの組換えアデノウイルスの項をご覧ください。

本ベクターは定められた実験条件下で定められた宿主細胞に導入した時に組換えウイルスを産生する様に設計されていますが、それ以外の条件下でウイルスが産生される可能性は否定できません。従いまして、ウイルス産生以外の目的で本ベクターを使用される場合は、十分に注意して下さい。

組換えアデノウイルス産生用シャトルベクター(コスミドベクター)は、制限酵素を用いた組換え DNA 操作によりアデノウイルス由来遺伝子を取り除き、プラスミドベクターへの変換が可能です(アデノ落とし)。これにより発現ベクターとして使用できます。「アデノ落とし」については「実験医学 Vol. 21, No. 7 (5月号) クローズアップ実験法、寺島他 pp.931-936」をご覧ください。

東京大学医科学研究所 菅野純夫博士より提供していただいたヒト完全長 cDNA を搭載した Shuttle Vector of Sugano Full-Length Human cDNA を提供しています。オリゴキャップ法により単離構築された cDNA クローンからインサートを切出し、組換えアデノウイルス作製用シャトルベクターに組込みました。組換えアデノウイルスの作製の他、「アデノ落とし」によりアデノウイルスゲノムの大部分を除いたプラスミドベクターを得ることができ、それを発現ベクターとして利用可能です。

カテゴリ毎に分類した一覧表は、下記をご覧ください。

<http://dna.brc.riken.jp/lab/dna/en/sugano.html>

各遺伝子材料のさらに詳しい情報は、インターネットホームページ <http://dna.brc.riken.jp/lab/dna/rvd/adenoja.html#palag6> をご覧ください。

Shuttle Vector for Recombinant Viruses

We provide shuttle vectors for preparation of recombinant adenoviruses. You can obtain recombinant viruses by transfecting appropriate cells, such as HEK293 cells, with these shuttle vectors under appropriate conditions. In some cases, however, it is difficult to obtain certain recombinant viruses because of the toxic effect of inserted gene product.

These vectors may also be used as mammalian expression vectors after conversion to plasmid DNA by the self-ligation method. Infectious recombinant adenoviruses produced by transfecting HEK293 cells with these shuttle vectors are also available from the RIKEN DNA Bank. The viral supernatants produced by host cells transfected with these vectors under nonstandard conditions might contain hazardous recombinant viruses in some cases. Due caution must be paid in producing and handling the recombinant adenoviruses.

Shuttle Vector of Sugano Full-Length Human cDNA

These shuttle vectors were constructed for generation of recombinant adenovirus based on pAxCALNLw cosmid vector. Full-length human cDNA produced by 'oligo-cap method' was inserted into *Swa*I site of pAxCALNLw.

Recombinant adenovirus can be obtained by 'COS-TPC method'.

http://dna.brc.riken.jp/lab/dna/en/sugano_gene.html

List of shuttle vectors for construction of recombinant adenovirus

| RDB no. | Name of vector | Short title |
|----------|----------------|--|
| RDB 917 | pAxcw | A cassette cosmid for construction of recombinant adenovirus |
| RDB 918 | pAxc | A cassette cosmid for construction of recombinant adenovirus |
| RDB 1678 | pAxCAwt | A cassette cosmid for construction of a recombinant adenovirus |
| RDB 2564 | pAxCEAwTR | Cloning vector to generate recombinant adenovirus driven by human CEA promoter |
| RDB 2565 | pAxCEAwT | Cloning vector to generate recombinant adenovirus driven by human CEA promoter |
| RDB 3120 | pAxcwit | A dual cassette for constructing recombinant adenovirus |
| RDB 3121 | pAxCAwtit | A dual cassette for constructing recombinant adenovirus containing CAG promoter |
| RDB 3380 | pAxCAiLacZit | Shuttle vector to generate recombinant adenovirus harbouring <i>E. coli</i> LacZ |
| RDB 3444 | pUAd5L | Shuttle vector to generate recombinant adenovirus |
| RDB 3445 | pUAd5LCA | Shuttle vector to generate recombinant adenovirus |
| RDB 3446 | pUAd5LCALNL | Shuttle vector to generate recombinant adenovirus |
| RDB 3447 | pUAd5LCA | Shuttle vector to generate recombinant adenovirus |
| RDB 3448 | pUAd5LCALNL | Shuttle vector to generate recombinant adenovirus |
| RDB 5212 | pAxcwit2 | A dual cassette for constructing recombinant adenovirus |
| RDB 5213 | pAxCAwtit2 | A dual cassette for constructing recombinant adenovirus |
| RDB 5214 | pAxCALNLwtit2 | A dual cassette for constructing recombinant adenovirus |
| RDB 5215 | pAxEFwtit2 | A dual cassette for constructing recombinant adenovirus |

| Name of vector | Cloning site | Promoter ^a | Cre-loxP ^b | Production of recombinant adenovirus | | | | Cat. # |
|----------------|--------------|-----------------------|-----------------------|--------------------------------------|-------------------------|---------|------------------------|----------|
| | | | | In vitro ligation | Two-cosmid ^c | COS-TPC | Fiber-modified COS-TPC | |
| pAxcw | <i>Swa</i> I | | | | | Yes | | RDB 917 |
| pAxCAwt | <i>Swa</i> I | CA | | | | Yes | | RDB 1678 |
| pAxCALNLw | <i>Swa</i> I | CA | Yes | | | Yes | | d |
| pAxcwit | <i>Swa</i> I | | | Yes | | Yes | | RDB 3120 |
| pAxCAwtit | <i>Swa</i> I | CA | | Yes | | Yes | | RDB 3121 |
| pUAd5L | <i>Swa</i> I | | | | Yes | Yes | Yes | RDB 3444 |
| pUAd5LCA | <i>Swa</i> I | CA | | | Yes | Yes | Yes | RDB 3445 |
| pUAd5LCALNL | <i>Swa</i> I | CA | Yes | | Yes | Yes | Yes | RDB 3446 |

| Name of vector | Cloning site | Promoter ^a | Cre-loxP ^b | Production of recombinant adenovirus | | | | Cat. # |
|----------------|--------------|-----------------------|-----------------------|--------------------------------------|-------------------------|---------|------------------------|----------|
| | | | | In vitro ligation | Two-cosmid ^c | COS-TPC | Fiber-modified COS-TPC | |
| pAxCEAwT | <i>Swa</i> I | CEA | | | | Yes | | RDB 2625 |
| pAxewit2 | <i>Swa</i> I | | | Yes ^e | | Yes | | RDB 5212 |
| pAxCAwit2 | <i>Swa</i> I | CA | | Yes ^e | | Yes | | RDB 5213 |
| pAxCALNLwit2 | <i>Swa</i> I | CA | Yes | Yes ^e | | Yes | | RDB 5214 |
| pAxEFwit2 | <i>Swa</i> I | EF-1 alpha | | Yes ^e | | Yes | | RDB 5215 |

- a :CA, a modified promoter of the chicken gene for beta-actin with a cytomegalovirus-immediate early enhancer (CMV-IE)
- :CEA, carcinoembryonic antigen
- :EF-1 alpha, elongation factor 1 alpha
- b :Target gene harbored in the recombinant adenovirus can be expressed by co-infection with AxCANCre (RDB no. 1748, Gene 181: 207-212, 1996).
- c :Use pAF16Rct (RDB no. 3220) together to generate rAd.
- d :Available from Takara Bio Inc.
- e :*Pac*I restriction enzyme is also applicable for linearization as well as *Csp*45I restriction enzyme.

3. 組換えアデノウイルス (Recombinant Adenovirus)

<http://dna.brc.riken.jp/rvd/adenoja.html>

当開発室で提供するアデノウイルスは、HEK293 細胞内で増殖させ HEPES 緩衝液中で細胞破碎して取り出したものを感染性ウイルスとしてお送りしております。力価は測定していませんが、おおよそ 10^{6-8} pfu/ml のウイルス液 100 μ l を提供しております。お受け取り後は直ちに培養を開始するか、 -80°C で保存して下さい。なお、輸送中に力価が低下している可能性がありますので、一旦 HEK293 細胞に感染させウイルスを増やしてから使用されることをお勧めします。

組換えアデノウイルスの簡便な精製方法は組換えウイルスデータベースの SOP のページ又は Ugai et al., *Biochem. Biophys. Res. Commun.* 331, 1053-1060 (2005) をご覧下さい。

組換えアデノウイルスの輸送ならびに保存時の安定性については Ugai, H. et al., *Jpn J Cancer Res* 93, 598-603 (2002) をご覧下さい。

組換えアデノウイルスに限らず、組換え DNA クローンは突然変異を起こす可能性があります[Ugai, H. et al., *Biochem Biophys Res Commun* 300, 448-456 (2003)]。組込み遺伝子(ファイバー変異体アデノウイルスはファイバー領域も)の性状を予め PCR、DNA シーケンシング、ウエスタンブロッティング等により確認されることをお勧めします。

当開発室の組換えアデノウイルスは、現在は完全長導入法[Fukuda H. et al, *Microbiol.Immunol.*,50(8). 643-654, 2006]により作製しておりますが、過去のものには COS-TPC 法 [Miyake S. et al., *Proc Natl Acad Sci. USA* 93, 1320-1324 (1996)] により作製されており、作製過程で自律増殖可能なアデノウイルス(Replication Competent Adenovirus, RCA)が混入する可能性があります。また、組換えアデノウイルス増殖過程でも宿主である HEK293 細胞の持つ E1 遺伝子を組み換えにより獲得する場合がありますことが報告されています。RCA ポジティブなウイルスは細胞株を選ばずに増殖し、かつ組み換えにより目的遺伝子を失っている場合も多いため、組換えアデノウイルスを実験で使用する際には予め RCA ネガティブであることを確認する必要があります。当開発室から提供されるウイルスは RCA ネガティブであることを確認済みですが、ご自身で増殖させたウイルスは Suzuki E, et al. *Oncol Rep.* 11: 173-178(2004) あるいはホームページの「挿入遺伝子と RCA の確認」を参考にして RCA チェックを行って下さい。当開発室で使用している RCA が持つ E1 領域を検出するための PCR プライマー配列を Table 1 に示しております。

提供形態

組換えアデノウイルスは感染細胞ライセートとして提供しております。国内研究者にはドライアイス梱包でお送りします。

組換えアデノウイルスの宿主になる HEK293 細胞は理研細胞材料開発室または ATCC から入手して下さい。ホームページは下記の通りです。

RIKEN Cell Bank: <http://www.brc.riken.jp/lab/cell/>

ATCC: <http://www.atcc.org/Distributors/Distributors.cfm>

各遺伝子材料のさらに詳しい情報は、

インターネットホームページ(<http://dna.brc.riken.jp/rvd/adenoja.html>)をご覧ください。

組換えウイルスの取り扱いは前述のページの他、組換えウイルスデータベースの SOP のページでも公開しています。 <http://dna.brc.riken.jp/rvd/sopja.html>

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2) 組換えアデノウイルスの作製

完全長導入法によるもの

- Fukuda H. et al, Microbiol.Immunol.,50(8). 643-654, 2006

COS-TPC 法によるもの

- Miyake et al., Proc Natl Acad Sci USA 93, 1320-1324 (1996)

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Recombinant Adenovirus

The RIKEN DNA Bank provides recombinant adenovirus as crude lysate of infected HEK293 cells. According to our study about the stability of adenovirus [Ugai, H. et al., Jpn J Cancer Res 93, 598-603 (2002)], we send them by airmail at room temperature. We are not precisely determined their plaque forming units (pfu) however, we ship 0.1ml of infectious recombinant adenovirus solution that have pfu/ml of around 10^6 to 10^8 . As we cannot rule out the possibility that the titer of the recombinant adenovirus has fallen during transport, we recommend amplifying it prior to use. Once you received the shipment, we recommend that you use one-half of the solution for infection and store the other half at -80°C .

Most of recombinant adenoviruses provided from the RIKEN DNA Bank are prepared by the COS-TPC method [Miyake S. et al., Proc Natl Acad Sci. USA 93, 1320-1324 (1996)] and there may be a little possibilities to have Replication Competent Adenovirus (RCA) even though we check them before shipment. In addition, recombinant adenovirus

sometimes becomes RCA by getting the E1 gene (E1A and/or E1B) derived from the HEK293 during preparation[Suzuki E, et al. Oncol Rep. 11: 173-178(2004)]. For these reasons, checking RCA prior to use is recommended, especially for the viruses prepared by yourselves. Table 1 indicates sequences for PCR primers to detect E1A and E1B.

Moreover, recombinant adenoviruses as well as recombinant DNA clones have a little potential to have mutation [Ugai, H. et al., Biochem Biophys Res Commun 300, 448-456 (2003)]. Therefore, the structure and function of viruses should be examined by PCR, DNA sequencing or Western blotting before your experiment.

Table 1. Sequences of primers for PCR

Detection of E1A

| Name | Position ^a | Sequence | Ref. |
|-------|-----------------------|--|------|
| E1AF1 | 560-595 | 5'-ATG AGA CAT ATT ATC TGC CAC GGA GGT GTT ATT AC-3' | b |
| E1AF2 | 626-661 | 5'-CTG ATC GAA GAG GTA CTG GCT GAT AAT CTT CCA CC-3' | c |
| E1AR2 | 1545-1511 | 5'-TTA TGG CCT GGG GCG TTT ACA GCT CAA GTC CAA AG-3' | b |

Detection of E1B

| Name | Position ^a | Sequence | Ref. |
|-------|-----------------------|--|------|
| E1BF1 | 2002-2035 | 5'-AGT TTT ATA AAG GAT AAA TGG AGC GAA GAA ACC C-3' | c |
| E1BF2 | 2097-2131 | 5'-ACA CAA GAA TCG CCT GCT ACT GTT GTC TTC CGT CC-3' | c |
| E1BR1 | 2495-2462 | 5'-AGT GGT CAG CTG CTC TAT GGA ATA CTT CTG CGC G-3' | c |
| E1BR2 | 3156-3122 | 5'-TGC GAG AGT GGC TGG CTA CGT GAA TGG TCT TCA GC-3' | c |
| E1BR3 | 3285-3251 | 5'-TGC TCT CGG GCT CAA GCA ATA TCT TAG TGT GAC TC-3' | c |

a Positions of nucleotide sequences correspond to those of the nucleotide sequence of human adenovirus type 5 (Genbank accession number M73260).

b Ugai et al., Biochem Biophys Res Commun 300, 448-456 (2003).

c Suzuki E, et al. Oncol Rep. 11: 173-178(2004).

4. プロモーターコレクション (Promoter Collection)

<http://dna.brc.riken.jp/ja/promoterja.html>

個々の遺伝子の発現を転写段階で調節するうえで重要な働きをしているプロモーター領域を収集し、それらをルシフェラーゼ遺伝子の上流に連結したプロモーター・レポーターコンストラクト(プロモーターシリーズ)を当室では提供しています。

このプロモーターシリーズは個々のもしくは網羅的な遺伝子の転写調節を解析、また遺伝子の組織特異的発現を行う際の有用な研究材料として使用していただけます。

学術文献ならびにデータベースをもとに細胞株特異的に発現することが報告されている遺伝子、またガン関連などで注目されている転写因子ファミリーの標的遺伝子について、ヒト由来のプロモーター領域を PCR により単離し、ルシフェラーゼ遺伝子を持つ pKM2L vector (Renilla luciferase, RDB4026)もしくは pGL4.10 [luc2] (firefly luciferase) vector に挿入しております。すべてのレポーターコンストラクトは制限酵素によるサイズ確認を行っており、また、インサート DNA 両端の配列確認による品質検査を通ったものをラインナップしております。

さらに、各種培養細胞でのレポーターコンストラクトの発現確認も行っており、これらの結果は当室のホームページにて公開しております。さらに詳しい情報は下記 URL のホームページをご覧ください。

Promoter Collection

<http://dna.brc.riken.jp/en/promoteren.html>

The promoter, one of the most important regions of gene to regulate the transcription has been collected as a large series in the DNA Bank, RIKEN BioResource Center. These promoters were subcloned into plasmid that has the Luciferase reporter gene as a promoter reporter construct (the Promoter Series).

The Promoter Series are very useful for individual and/or comprehensive analysis of transcriptional regulation of genes. And each construct is also available for a source of tissue specific expression of genes that you focused.

The collecting human promoters were selected by tissue specific regulated genes and transcriptional factor targeted genes. Human promoter region that was amplified by PCR was subcloned into pKM2L (Renilla luciferase) or pGL4.10 [luc2] (firefly luciferase) vector. All of Promoter series were validated by restriction enzyme digestion and confirmation of end sequences of insert DNA.

Furthermore, we checked the promoter activities of the Promoter series on various kinds of cell lines. All information of the series is available on our home page.

List of Control Vector

<http://dna.brc.riken.jp/en/resource290en.html>

| Cat. # | Name of clone | Gene |
|----------|---------------|--|
| RDB 5549 | pKM2L-pvTK | HSV herpes simplex virus thymidine kinase (HSV-TK) |
| RDB 5550 | pKM2L-pvSV40 | SV40 simian virus 40 early enhancer/promoter region (SV40) |
| RDB 5551 | pKM2L-pvCMV | CMV cytomegalovirus immediate enhancer/promoter (CMV) |
| RDB 2443 | pCAcc-Luc+ | Expression vector of firefly luciferase, CA promoter |
| RDB 3988 | pCMVluc+ | Expression vector of firefly luciferase, CMV promoter |
| RDB 3989 | pCALuc+ | Expression vector of firefly luciferase, CA promoter |
| RDB 6410 | pRL-RSV | Raus sarcoma virus promoter (RSV) |
| RDB 6411 | pGL3-RSV | Raus sarcoma virus promoter (RSV) |

List of Promoter Collection (1)

| Locus symbol | RDB No. | Name of clone | Gene of insert | Size of inserted DNA (PCR-amplified) |
|--------------|---------|--------------------|---|---|
| AFP | 5532 | pKM2L-phAFP | Human alpha-fetoprotein | 3,878 bp |
| AKR1B1 | 5467 | pKM2L-phAR | Human aldose reductase | 3,035 bp |
| ALOX15 | 5533 | pKM2L-ph15LO | Human 15-lipoxygenase (15-LO) | 2,653 bp |
| ALPP | 5902 | pKM2L-phPLAP1 | Human alkaline phosphatase, placental | 804 bp |
| ALPPL2 | 5903 | pKM2L-phALP1 | Human alkaline phosphatase, placental-like 2 | 746 bp |
| B2M | 5472 | pKM2L-phB2M | Human beta-2 microglobulin (B2M) | 302 bp |
| BGLAP | 5512 | pKM2L-phOC | Human bone gamma-carboxyglutamate (gla) protein (osteocalcin) | 831 bp |
| BGLAP | 5904 | pKM2L-phOC (2) | Human bone gamma-carboxyglutamate (gla) protein (osteocalcin) | 1,076 bp |
| BMP4 | 5473 | pKM2L-phBMP4P2 | Human bone morphogenetic protein 4 (BMP4), P2 promoter | 2,238 bp |
| BMP4 | 5913 | pKM2L-phBMP4P2 (2) | Human bone morphogenetic protein 4 (BMP4), P2 promoter | 1,473 bp |
| BMP5 | 5475 | pKM2L-phBMP5 | Human bone morphogenetic protein 5 (BMP5) | 1,078 bp |
| BMP6 | 5474 | pKM2L-phBMP6 | Human bone morphogenetic protein 6 | 1,317 bp |

List of Promoter Collection (1)

| Locus symbol | RDB No. | Name of clone | Gene of insert | Size of inserted DNA (PCR-amplified) |
|--------------|---------|-----------------------|--|---|
| BMP7 | 5887 | pKM2L-phBMP7 | Human bone morphogenetic protein 7 | 1,822 bp |
| CCNA1 | 5482 | pKM2L-phCYCA1 | Human cyclin A1 | 1,279 bp |
| CDC25A | 5476 | pKM2L-phCDC25A | Human cdc25A | 884 bp |
| CDC25C | 5468 | pKM2L-phCDC25C | Human cdc25C | 1,111 bp |
| CDC25C | 5908 | pKM2L-phCDC25C (2) | Human cdc25C | 775 bp |
| CDH5 | 5899 | pKM2L-phVEC | Human cadherin 5, type 2, VE-cadherin (vascular epithelium) | 3,312 bp |
| CDKN1A | 5893 | pKM2L-phP21 | Human p21 cyclin dependent kinase inhibitor/WAF1/CIP1 | 2,737 bp |
| CDKN1B | 5508 | pKM2L-phKIP1 | Human p27 cyclin-dependent kinase inhibitor (kip1) | 2,802 bp |
| CDKN2A | 5509 | pKM2L-phCDKN2 | Human p16 cyclin-dependent kinase inhibitor 2 (CDKN2/INK4A/CDK4/MTS1) | 2,966 bp |
| CDKN2A | 5510 | pKM2L-phP14ARF | Human p14 alternative reding frame (ARF) | 979 bp |
| CDKN2A | 5811 | pKM2L-phCDKN2 (2) | Human p16 cyclin-dependent kinase inhibitor 2 (CDKN2/INK4A/CDK4/MTS1) | 1,038 bp |
| CGA | 5524 | pKM2L-phGCA | Human glycoprotein hormone alpha-subunit (GCA/GPHalpha/alphaGSU) | 892 bp |
| CRHR1 | 5536 | pKM2L-phCRHR1 | Human corticotropin releasing hormone receptor 1 | 2,165 bp |
| CXCR4 | 5481 | pKM2L-phCXCR4 | Human chemokine receptor (CXCR4) | 2,673 bp |
| DCT | 5492 | pKM2L-phDT | Human DOPAchrome tautomerase (DT,DCT/TRP-2,TYRP2) | 711 bp |
| E2F1 | 5483 | pKM2L-phE2F1 (1) | Human transcription factor E2F1 (E2F1) | 1,401 bp |
| E2F1 | 5537 | pKM2L-phE2F1 (2) | Human transcription factor E2F1 (E2F1) | 1,516 bp |
| EEF1A2 | 5484 | pKM2L-phEF1A2 | Human eukaryotic translation elongation factor 1 alpha 2 | 2,585 bp |

List of Promoter Collection (1)

| Locus symbol | RDB No. | Name of clone | Gene of insert | Size of inserted DNA (PCR-amplified) |
|--------------|---------|-----------------|--|---|
| EGR1 | 5485 | pKM2L-phEGR1 | Human early growth response protein 1 (EGR1) | 2,296 bp |
| ENG | 5477 | pKM2L-phEND | Human endoglin (END) | 748 bp |
| ESR1 | 5487 | pKM2L-phER | Human estrogen receptor | 3,824 bp |
| FASLG | 5488 | pKM2L-phFASL | Human Fas ligand (FasL) | 453 bp |
| FSHB | 5539 | pKM2L-phFSHB | Human follicle stimulating hormone, beta polypeptide | 2,470 bp |
| GCG | 5490 | pKM2L-phGCG | Human glucagon | 1,662 bp |
| GH1 | 5531 | pKM2L-phCS1 | Human growth hormone 1 | 554 bp |
| GH1 | 5542 | pKM2L-phGH1 | Human growth hormone 1 | 600 bp |
| GH1 | 5905 | pKM2L-phGH1 (2) | Human growth hormone 1 | 783 bp |
| GHR | 5489 | pKM2L-phV9GHR | Human growth hormone receptor (GHR), V9 promoter | 868 bp |
| GHR | 5881 | pKM2L-phV1GHR | Human growth hormone receptor (GHR), V1 | 1,940 bp |
| GHRH | 5540 | pKM2L-phGHRF | Human growth hormone releasing hormone | 1,143 bp |
| GRIA2 | 5891 | pKM2L-phBGR2 | Human glutamate receptor, ionotropic, AMPA 2 | 1,513 bp |
| HIF1A | 5523 | pKM2L-phHIF1A | Human hypoxia-inducible factor 1, alpha subunit | 3,177 bp |
| HK2 | 5882 | pKM2L-phHKII | Human hexokinase 2 | 1,495 bp |
| HK3 | 5486 | pKM2L-phHK3 | Human hexokinase 3 | 654 bp |
| HK3 | 5911 | pKM2L-phHK3 (2) | Human hexokinase 3 (HK3) | 791 bp |
| HSPA6 | 5491 | pKM2L-phHSP70B' | Human heat shock 70kDa protein 6 (HSP70B') | 668 bp |
| ID2 | 5519 | pKM2L-phID2 | Human inhibitor of differentiation-2 (Id2) | 881 bp |
| IGF2 | 5528 | pKM2L-phIGFIIP4 | Human insulin-like growth factor 2 (somatomedin A) | 561 bp |
| IL1B | 5526 | pKM2L-phIL1B | Human interleukin 1 beta (IL1B) | 3,791 bp |

List of Promoter Collection (1)

| Locus symbol | RDB No. | Name of clone | Gene of insert | Size of inserted DNA (PCR-amplified) |
|--------------|---------|-------------------|---|---|
| INHBA | 5466 | pKM2L-phABA | Human activin beta-A | 379 bp |
| INS | 5889 | pKM2L-phINS | Human insulin | 330 bp |
| ITGA2 | 5527 | pKM2L-phIGNA2 | Human integrin, alpha 2 | 1,090 bp |
| ITGA6 | 5469 | pKM2L-phITGA6 | Human alpha 6 integrin subunit (ITGA6) | 807 bp |
| ITGA6 | 5912 | pKM2L-phITGA6 (2) | Human alpha 6 integrin subunit (ITGA6) | 893 bp |
| ITGAV | 5518 | pKM2L-phIGNA5 | Human integrin, alpha V (vitronectin receptor, alpha polypeptide, antigen CD51) | 691 bp |
| ITGB3 | 5517 | pKM2L-phIGNB3 | Human integrin beta-3 | 585 bp |
| ITGB4 | 5530 | pKM2L-phIGNB4 | Human integrin, beta 4 | 3,035 bp |
| KDR | 5525 | pKM2L-phKDR | Human receptor tyrosine (KDR/flk-1) | 1,083 bp |
| KIT | 5812 | pKM2L-phKIT | Human c-kit | 331 bp |
| KLK3 | 5471 | pKM2L-phPSA (1) | Human kallikrein-related peptidase 3 | 639 bp |
| KLK3 | 5546 | pKM2L-phPSA | Human prostate-specific antigen/kallikrein 3 (PSA/KLK3) | 740 bp |
| KLK3 | 5910 | pKM2L-phPSA (3) | Human prostate-specific antigen/kallikrein 3 (PSA/KLK3) | 745 bp |
| KRT17 | 5548 | pKM2L-phK17 | Human keratin 17 | 453 bp |
| KRT17 | 5907 | pKM2L-phK17 (2) | Human keratin 17 | 987 bp |
| KRT5 | 5886 | pKM2L-phK5 | Human keratin 5 | 6,284 bp |
| LALBA | 5470 | pKM2L-phALA | Human lactalbumin, alpha | 3,482 bp |
| LCK | 5892 | pKM2L-phLCK | Human lck protein tyrosine kinase (upstream promoter) | 2,900 bp |
| LCP1 | 5516 | pKM2L-phLPLT | Human lymphocyte cytosolic protein 1 | 2,386 bp |
| LHB | 5543 | pKM2L-phLHB | Human luteinizing hormone beta polypeptide | 603 bp |
| LHB | 5906 | pKM2L-LHB | Human luteinizing hormone-beta (LHB) | 1,312 bp |
| LTF | 5545 | pKM2L-phLF (2) | Human lactotransferrin | 1,331 bp |
| MBP | 5890 | pKM2L-phMBP | Human myelin basic protein (MBP) | 2,976 bp |
| MC1R | 5515 | pKM2L-phMC1R | Human melanocortin 1 receptor (MC1R) | 1,743 bp |

List of Promoter Collection (1)

| Locus symbol | RDB No. | Name of clone | Gene of insert | Size of inserted DNA (PCR-amplified) |
|--------------|---------|---------------|---|---|
| MDK | 5514 | pKM2L-phMK | Human midkine (neurite growth-promoting factor 2) | 2,312 bp |
| MMP1 | 5478 | pKM2L-phMMP1 | Human collagenase-1 (MMP-1) | 2,331 bp |
| MMP2 | 5479 | pKM2L-phCLG4 | Human collagenase type IV (CLG4/MMP-2) | 1,716 bp |
| MSX2 | 5915 | pKM2L-phMSX2 | Human msh homeobox 2 | 569 bp |
| MUC1 | 5538 | pKM2L-phDF3 | Human mucin 1, cell surface associated | 1,633 bp |
| MYH7 | 5901 | pKM2L-phBMHC | Human cardiac beta-myosin heavy chain (beta-MHC) | 1,691 bp |
| MYL2 | 5900 | pKM2L-phMLC2V | Human myosin, light chain 2, regulatory, cardiac, slow | 2,357 bp |
| NFKBIA | 5520 | pKM2L-phIKBA | Human I kappa B-alpha | 406 bp |
| NR4A1 | 5884 | pKM2L-phTR3 | Human TR3 orphan receptor | 2,446 bp |
| OAT | 5513 | pKM2L-phOAT | Human ornithine aminotransferase (gyrate atrophy) | 1,443 bp |
| P4HB | 5511 | pKM2L-phP4HB | Human procollagen-proline, 2-oxoglutarate 4-dioxygenase (proline 4-hydroxylase), beta polypeptide | 937 bp |
| PAX3 | 5914 | pKM2L-phPAX3 | Human paired box gene 3 | 2,163 bp |
| PAX6 | 5898 | pKM2L-phPAX6 | Human paired box gene 6 | 2,711 bp |
| PCSK2 | 5885 | pKM2L-phPC2 | Human proprotein convertase subtilisin/kexin type 2 | 1,126 bp |
| PDK4 | 5505 | pKM2L-phPDK4 | Human pyruvate dehydrogenase kinase, isozyme 4 | 2,144 bp |
| PLAU | 5547 | pKM2L-phUPA | Human urokinase plasminogen activator (uPA) | 2,103 bp |

List of Promoter Collection (1)

| Locus symbol | RDB No. | Name of clone | Gene of insert | Size of inserted DNA (PCR-amplified) |
|--------------|---------|----------------------|---|---|
| POMC | 5503 | pKM2L-phPOMC | Human proopiomelanocortin (adrenocorticotropin/ beta-lipotropin/ alpha-melanocyte stimulating hormone/ beta-melanocyte stimulating hormone/ beta-endorphin) | 741 bp |
| PPP1R12A | 5535 | pKM2L-phMYPT1 | Human protein phosphatase 1, regulatory (inhibitor) subunit 12A | 1,546 bp |
| PTGS1 | 5501 | pKM2L-phPTGS1 | Human prostaglandin-endoperoxide synthase 1 | 1,834 bp |
| PTGS2 | 5480 | pKM2L-phPGHS2 (1) | Human prostaglandin synthase-2/cyclooxygenase (PGHS-2/COX-2) | 1,668 bp |
| PTGS2 | 5504 | pKM2L-phPGHS2 (2) | Human prostaglandin synthase-2/cyclooxygenase (PGHS-2/COX-2) | 891 bp |
| PTH | 5544 | pKM2L-phPTH | Human parathyroid hormone | 768 bp |
| PTPN1 | 5493 | pKM2L-phPTP1B | Human protein tyrosine phosphatase 1B (PTP1B) | 1,944 bp |
| PTPN1 | 5909 | pKM2L-phPTP1B (2) | Human protein tyrosine phosphatase 1B (PTP1B) | 1,966 bp |
| SCOTIN | 5521 | pKM2L-phSCT | Human Scotin | 3,272 bp |
| SELE | 5894 | pKM2L-phESEL | Human E-selectin/Endothelial leukocyte adhesion molecule 1 (ELAM-1)/leukocyte-endothelial cell adhesion molecule 2 (LECAM2)/CD62E antigen | 1,788 bp |

List of Promoter Collection (1)

| Locus symbol | RDB No. | Name of clone | Gene of insert | Size of inserted DNA (PCR-amplified) |
|--------------|---------|--------------------|--|---|
| SELL | 5895 | pKM2L-phLSEL | Human L-selectin/lymph node homing receptor/leukocyte adhesion molecule-1 (LAM-1)/leukocyte surface antigen Leu-8/Leukocyte-endothelial cell adhesion molecule 1 | 881 bp |
| SELP | 5502 | pKM2L-phPSL | Human P-selectin CD62 (GRMP) | 1,363 bp |
| SERPINA1 | 5465 | pKM2L-phAAT | Human alpha-1-antitrypsin (AAT) | 1,274 bp |
| SERPINE1 | 5506 | pKM2L-phPAI1 | Human plasminogen activator inhibitor 1 (PAI-1) | 830 bp |
| SLPI | 5500 | pKM2L-phSLPI | Human leukoprotease inhibitor (SLPI) | 870 bp |
| SMAD7 | 5888 | pKM2L-phSMAD7 | Human Smad7 | 3,591 bp |
| SOX17 | 5897 | pKM2L-phSOX17 | Human SRY (sex determining region Y)-box 17 | 3,304 bp |
| SPRR2F | 5499 | pKM2L-phSPRR2F | Human small proline-rich protein 2F (SPRR2F) | 411 bp |
| SPRR2F | 5810 | pKM2L-phSPRR2F (2) | Human small proline-rich protein 2F | 3,095 bp |
| SREBF2 | 5498 | pKM2L-phSREBP2 | Human sterol regulatory element binding transcription factor 2 | 832 bp |
| T | 5896 | pKM2L-phBRC | Human T, brachyury homolog | 2,284 bp |
| TERC | 5522 | pKM2L-phTR | Human telomerase RNA component | 867 bp |
| TERT | 5534 | pKM2L-phTERT | Human telomerase reverse transcriptase, catalytic subunit (TERT) | 1,453 bp |
| TGFBR2 | 5497 | pKM2L-phTGFBRII | Human transforming growth factor-beta type II receptor (TGF-beta RII) | 1,952 bp |
| TP53 | 5507 | pKM2L-phP53 | Human p53 | 532 bp |
| TP73 | 5529 | pKM2L-phTP73 | Human p73 tumor protein (TP73) | 2,834 bp |
| TRHR | 5496 | pKM2L-phTRHR | Human thyrotropin-related hormone receptor (TRHR) | 1,834 bp |
| TSHB | 5495 | pKM2L-phTSHB | Human thyroid stimulating hormone, beta | 1,230 bp |

List of Promoter Collection (1)

| Locus symbol | RDB No. | Name of clone | Gene of insert | Size of inserted DNA (PCR-amplified) |
|--------------|---------|-----------------------|------------------------------------|---|
| TYR | 5494 | pKM2L-phTYR (Alu-) | Human tyrosinase (TYR) | 2308 |
| TYR | 5809 | pKM2L-phTYR (Alu+) | Human tyrosinase (TYR) | 2,707 bp |
| TYRP1 | 5883 | pKM2L-phTRP1 | Human tyrosinase-related protein 1 | 239 bp |

List of Promoter Collection (2)

| Locus symbol | RDB No. | Name of clone | Gene of insert | Size of inserted DNA (PCR-amplified) |
|--------------|---------|--------------------------|--|---|
| ABCB1 | 7315 | pGL4-phABCB1 | Human ATP-binding cassette, sub-family B (MDR/TAP), member 1 | 1,219 bp |
| AIFM2 | 7332 | pGL4-phAIFM2 (AMID) | Human apoptosis-inducing factor, mitochondrion-associated, 2 | 1,278 bp |
| AKT1 | 7331 | pGL4-phAKT1 | Human v-akt murine thymoma viral oncogene homolog 1 | 1,152 bp |
| ALDOA | 7512 | pGL4-phALDOA | Human aldolase A, fructose-bisphosphate | 1,403 bp |
| ANTXR1 | 7333 | pGL4-phANTXR1 | Human anthrax toxin receptor 1 | 1,189 bp |
| APAF1 | 7316 | pGL4-phAPAF1 (Apaf-1) | Human apoptotic peptidase activating factor 1 | 1,152 bp |
| APCS | 7317 | pGL4-phAPCS | Human amyloid P component, serum | 1,163 bp |
| APOC3 | 7303 | pGL4-phAPOC3 | "Human apolipoprotein C-III " | 1,002 bp |
| AQP3 | 7311 | pGL4-phAQP3 | "Human aquaporin 3 (Gill blood group) " | 1,242 bp |
| ASNS | 7305 | pGL4-phASNS | Human asparagine synthetase | 1,278 bp |
| ATR | 7334 | pGL4-phATR | Human ataxia telangiectasia and Rad3 related | 1,147 bp |
| B2M | 7479 | pGL4-phB2M | Human beta-2-microglobulin | 1,448 bp |
| BAI1 | 7401 | pGL4-phBAI1 | Human brain-specific angiogenesis inhibitor 1 | 1,368 bp |
| BAK1 | 7318 | pGL4-phBAK1 | Human BCL2-antagonist/killer 1 | 1,193 bp |

List of Promoter Collection (2)

| Locus symbol | RDB No. | Name of clone | Gene of insert | Size of inserted DNA (PCR-amplified) |
|--------------|---------|---------------------------|---|---|
| BCL2L1 | 7335 | pGL4-phBCL2L1 | Human BCL2-like 1 | 1,214 bp |
| BRCA1 | 7296 | pGL4-phBRCA1 | Human breast cancer 1, early onset | 1,152 bp |
| BTG2 | 7402 | pGL4-phBTG2 | Human BTG family, member 2 | 1,356 bp |
| C12orf5 | 7414 | pGL4-phC12orf5 (TIGAR) | Human chromosome 12 open reading frame 5 | 1,335 bp |
| CABLES1 | 7337 | pGL4-phCABLES1 | Human Cdk5 and Abl enzyme substrate 1 | 1,222 bp |
| CALCA | 7291 | pGL4-phCALCA | Human calcitonin-related polypeptide alpha | 1,321 bp |
| CASP1 | 7338 | pGL4-phCASP1 | Human caspase 1, apoptosis-related cysteine peptidase (interleukin 1, beta, convertase) | 1,169 bp |
| CAV1 | 7364 | pGL4-phCAV1 | Human caveolin 1, caveolae protein, 22kDa | 1,309 bp |
| CCND1 | 7299 | pGL4-phCCND1 | Human cyclin D1 | 1,214 bp |
| CD82 | 7416 | pGL4-phCD82 | Human CD82 molecule | 1,319 bp |
| CDKN1A | 7302 | pGL4-phCDKN1A | Human cyclin-dependent kinase inhibitor 1A (p21, Cip1) | 1,227 bp |
| CGA | 7456 | pGL4-phCGA | Human glycoprotein hormones, alpha polypeptide | 1,297 bp |
| CHEK1 | 7319 | pGL4-phCHEK1 | Human CHK1 checkpoint homolog (S. pombe) | 1,208 bp |
| CHEK2 | 7407 | pGL4-phCHEK2 | Human CHK2 checkpoint homolog (S. pombe) | 1,312 bp |
| CHUK | 7383 | pGL4-phCHUK | Human conserved helix-loop-helix ubiquitous kinase | 1,315 bp |
| COL1A1 | 7459 | pGL4-phCOL1A1 | Human collagen, type I, alpha 1 | 1,260 bp |
| CSF2 | 7482 | pGL4-phCSF2 | Human colony stimulating factor 2 (granulocyte-macrophage) | 1,446 bp |
| CSNK2A1 | 7483 | pGL4-phCSNK2A1 | Human casein kinase 2, alpha 1 polypeptide | 1,430 bp |

List of Promoter Collection (2)

| Locus symbol | RDB No. | Name of clone | Gene of insert | Size of inserted DNA (PCR-amplified) |
|--------------|---------|------------------------|--|---|
| CX3CL1 | 7340 | pGL4-phCX3CL1 | Human chemokine (C-X3-C motif) ligand 1 | 1,236 bp |
| CYP11A1 | 7460 | pGL4-phCYP11A1 | Human cytochrome P450, family 11, subfamily A, polypeptide 1 | 1,218 bp |
| DKK1 | 7341 | pGL4-phDKK1 | Human dickkopf homolog 1 (<i>Xenopus laevis</i>) | 1,166 bp |
| DRAM1 | 7412 | pGL4-phDRAM | Human damage-regulated autophagy modulator | 1,346 bp |
| DUSP1 | 7368 | pGL4-phDUSP1 | Human dual specificity phosphatase 1 | 1,165 bp |
| DUSP12 | 7384 | pGL4-phDUSP12 | Human dual specificity phosphatase 12 | 1,310 bp |
| EGFR | 7398 | pGL4-phEGFR | Human epidermal growth factor receptor (erythroblastic leukemia viral (v-erb-b) oncogene homolog, avian) | 1,340 bp |
| EGR1 | 7369 | pGL4-phEGR1 | Human early growth response 1 | 1,310 bp |
| EPCAM | 7367 | pGL4-phEPCAM(TA CSTD1) | Human tumor-associated calcium signal transducer 1 | 1,511 bp |
| EPHA2 | 7342 | pGL4-phEPHA2 | Human EPH receptor A2 | 1,163 bp |
| EZH2 | 7370 | pGL4-phEZH2 | Human enhancer of zeste homolog 2 (<i>Drosophila</i>) | 1,205 bp |
| F3 | 7458 | pGL4-phF3 | Human coagulation factor III (thromboplastin, tissue factor) | 1,258 bp |
| F8 | 7519 | pGL4-phF8 | Human coagulation factor VIII, procoagulant component | 1,403 bp |
| FAS | 7349 | pGL4-phTNFRSF6 | Human Fas (TNF receptor superfamily, member 6) | 1,311 bp |
| FDXR | 7385 | pGL4-phFDXR | Human ferredoxin reductase | 1,353 bp |
| FOS | 7292 | pGL4-phFOS | Human v-fos FBJ murine osteosarcoma viral oncogene homolog | 1,261 bp |
| GADD45A | 7320 | pGL4-phGADD45A | Human growth arrest and DNA-damage-inducible, alpha | 1,225 bp |

List of Promoter Collection (2)

| Locus symbol | RDB No. | Name of clone | Gene of insert | Size of inserted DNA (PCR-amplified) |
|--------------|---------|-------------------------|--|---|
| GH2 | 7309 | pGL4-phGH2 | Human growth hormone 2 | 1,190 bp |
| GML | 7371 | pGL4-phGML | Human glycosylphosphatidylinositol anchored molecule like protein | 1,308 bp |
| GNLY | 7476 | pGL4-phFOSL1 | Human FOS-like antigen 1 | 1,321 bp |
| HDAC1 | 7484 | pGL4-phHDAC1 | Human histone deacetylase 1 | 1,500 bp |
| HLA-DRA | 7389 | pGL4-phHLA-DRA | Human major histocompatibility complex, class II, DR alpha | 1,423 bp |
| HLA-E | 7388 | pGL4-phHLA-E | Human major histocompatibility complex, class I, E | 1,183 bp |
| HMOX1 | 7485 | pGL4-phHMOX1 | Human heme oxygenase (decycling) 1 | 1,470 bp |
| HPGD | 7457 | pGL4-phHPGD | Human hydroxyprostaglandin dehydrogenase 15-(NAD) | 1,251 bp |
| HSP90AB1 | 7321 | pGL4-phHSP90AB1 (HSPCB) | Human heat shock protein 90kDa alpha (cytosolic), class B member 1 | 1,216 bp |
| ICAM1 | 7390 | pGL4-phICAM1 | Human intercellular adhesion molecule 1 | 1,327 bp |
| ID2 | 7306 | pGL4-phID2 | Human inhibitor of DNA binding 2, dominant negative helix-loop-helix protein | 1,500 bp |
| IFI16 | 7372 | pGL4-phIFI16 | Human interferon, gamma-inducible protein 16 | 1,316 bp |
| IFNG | 7297 | pGL4-phIFNG | Human interferon, gamma | 1,239 bp |
| IL2 | 7391 | pGL4-phIL2 | Human interleukin 2 | 1,269 bp |
| IL5 | 7392 | pGL4-phIL5 | Human interleukin 5 (colony-stimulating factor, eosinophil) | 1,302 bp |
| IL6 | 7313 | pGL4-phIL6 | Human interleukin 6 (interferon, beta 2) | 1,322 bp |
| IL8 | 7322 | pGL4-phIL8 | Human interleukin 8 | 1,263 bp |
| INS | 7387 | pGL4-phINS | Human insulin | 1,283 bp |
| JUN | 7298 | pGL4-phJUN | Human jun oncogene | 1,187 bp |
| KLK3 | 7324 | pGL4-phKLK3 | Human kallikrein-related peptidase 3 | 1,182 bp |
| KLKB1 | 7373 | pGL4-phKLKB1 | Human kallikrein B, plasma (Fletcher factor) 1 | 1,304 bp |

List of Promoter Collection (2)

| Locus symbol | RDB No. | Name of clone | Gene of insert | Size of inserted DNA (PCR-amplified) |
|--------------|---------|--------------------------|---|---|
| LIF | 7417 | pGL4-phLIF | Human leukemia inhibitory factor (cholinergic differentiation factor) | 1,304 bp |
| LTA | 7486 | pGL4-phLTA | Human lymphotoxin alpha (TNF superfamily, member 1) | 1,435 bp |
| MAD1L1 | 7374 | pGL4-phMAD1L1 | Human MAD1 mitotic arrest deficient-like 1 (yeast) | 1,379 bp |
| MAT2A | 7393 | pGL4-phMAT2A | Human methionine adenosyltransferase II, alpha | 1,302 bp |
| MDM2 | 7403 | pGL4-phMDM2 | Human Mdm2 p53 binding protein homolog (mouse) | 1,319 bp |
| MDM4 | 7418 | pGL4-phMDM4 | Human Mdm4 p53 binding protein homolog (mouse) | 1,319 bp |
| MGP | 7394 | pGL4-phMGP | Human matrix Gla protein | 1,317 bp |
| MKI67 | 7323 | pGL4-phMKI67 (Ki-67) | Human antigen identified by monoclonal antibody Ki-67 | 1,419 bp |
| MMP2 | 7314 | pGL4-phMMP2 | Human matrix metalloproteinase 2 | 1,183 bp |
| MT1A | 7513 | pGL4-phMT1A | Human metallothionein 1A | 1,327 bp |
| MYB | 7480 | pGL4-phMYB (c-myb) | Human v-myb myeloblastosis viral oncogene homolog (avian) | 1,463 bp |
| MYC | 7325 | pGL4-phMYC | Human v-myc myelocytomatosis viral oncogene homolog (avian) | 1,267 bp |
| NFATC4 | 7376 | pGL4-phNFATC4 | Human nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 4 | 1,315 bp |
| NFIC | 7399 | pGL4-phNFIC | Human nuclear factor I/C (CCAAT-binding transcription factor) | 1,152 bp |
| NFKB2 | 7478 | pGL4-phNFKB2 | Human nuclear factor of kappa light polypeptide gene enhancer in B-cells 2 (p49/p100) | 1,326 bp |
| NLRC4 | 7406 | pGL4-phNLRC4 (CARD12) | Human NLR family, CARD domain containing 4 | 1,318 bp |

List of Promoter Collection (2)

| Locus symbol | RDB No. | Name of clone | Gene of insert | Size of inserted DNA (PCR-amplified) |
|--------------|---------|-----------------------|--|---|
| NME1 | 7326 | pGL4-phNME1 | Human non-metastatic cells 1, protein (NM23A) expressed in | 1,243 bp |
| NOS2 | 7377 | pGL4-phNOS2A | Human nitric oxide synthase 2, inducible | 1,304 bp |
| NTS | 7308 | pGL4-phNTS | Human neurotensin | 1,237 bp |
| PCNA | 7365 | pGL4-phPCNA | Human proliferating cell nuclear antigen | 1,203 bp |
| PDHA1 | 7514 | pGL4-phPDHA1 | Human pyruvate dehydrogenase (lipoamide) alpha 1 | 1,455 bp |
| PENK | 7293 | pGL4-phPENK | Human proenkephalin | 1,282 bp |
| PERP | 7411 | pGL4-phPERP | Human PERP, TP53 apoptosis effector | 1,468 bp |
| PLAT | 7295 | pGL4-phPLAT | Human plasminogen activator, tissue | 1,047 bp |
| PLAU | 7487 | pGL4-phPLAU | Human plasminogen activator, urokinase | 1,431 bp |
| PLAUR | 7312 | pGL4-phPLAUR (uPAR) | Human plasminogen activator, urokinase receptor | 1,244 bp |
| PLK1 | 7327 | pGL4-phPLK1 | Human polo-like kinase 1 (Drosophila) | 1,221 bp |
| PML | 7343 | pGL4-phPML | Human promyelocytic leukemia | 1,305 bp |
| POLD1 | 7344 | pGL4-phPOLD1 | Human polymerase (DNA directed), delta 1, catalytic subunit 125kDa | 1,308 bp |
| PPP1R15A | 7307 | pGL4-phPPP1R15A | Human protein phosphatase 1, regulatory (inhibitor) subunit 15A | 1,246 bp |
| PPP2R4 | 7294 | pGL4-phPPP2R4 | Human protein phosphatase 2A activator, regulatory subunit 4 | 1,241 bp |
| PRKAB1 | 7328 | pGL4-phPRKAB1 | Human protein kinase, AMP-activated, beta 1 non-catalytic subunit | 1,173bp |
| "PSAP " | 7515 | pGL4-phPSAP (SFTPA1) | Human prosaposin | 1,418 bp |
| PTEN | 7400 | pGL4-phPTEN | Human phosphatase and tensin homolog | 1,442 bp |
| PTGS2 | 7300 | pGL4-phPTGS2 (hCox-2) | Human prostaglandin- endoperoxide synthase 2 (prostaglandin G/H synthase and cyclooxygenase) | 1,277 bp |
| PTTG1 | 7329 | pGL4-phPTTG1 | Human pituitary tumor-transforming 1 | 1,222 bp |

List of Promoter Collection (2)

| Locus symbol | RDB No. | Name of clone | Gene of insert | Size of inserted DNA (PCR-amplified) |
|--------------|---------|-------------------------|--|---|
| RB1 | 7345 | pGL4-phRB1 | Human retinoblastoma 1 | 1,333 bp |
| REL | 7481 | pGL4-phREL (c-rel) | Human v-rel reticuloendotheliosis viral oncogene homolog (avian) | 1,464 bp |
| RELA | 7366 | pGL4-phRELA | Human v-rel reticuloendotheliosis viral oncogene homolog A (avian) | 1,149 bp |
| RHOA | 7404 | pGL4-phRHOA | Human ras homolog gene family, member A | 1,316 bp |
| RPRM | 7409 | pGL4-phRPRM | Human reprimin, TP53 dependent G2 arrest mediator candidate | 1,300 bp |
| RRM2B | 7346 | pGL4-phRRM2B | Human ribonucleotide reductase M2 B (TP53 inducible) | 1,323 bp |
| SCO2 | 7415 | pGL4-phSCO2 | Human SCO cytochrome oxidase deficient homolog 2 (yeast) | 1,315 bp |
| SERPINE1 | 7461 | pGL4-phSERPINE1 (PAI-1) | Human serpin peptidase inhibitor, clade E (nexin, plasminogen activator inhibitor type 1), member 1 [Homo sapiens] | 1,478 bp |
| SESN2 | 7413 | pGL4-phSESN2 | Human sestrin 2 | 1,321 bp |
| SFN | 7408 | pGL4-phSFN | Human stratifin | 1,352 bp |
| SSTR2 | 7378 | pGL4-phSSTR2 | Human somatostatin receptor 2 | 1,320 bp |
| STAT1 | 7405 | pGL4-phSTAT1 | Human signal transducer and activator of transcription 1, 91kDa | 1,313 bp |
| STXBP2 | 7477 | pGL4-phGSTP1 | Human glutathione S-transferase pi 1 | 1,243 bp |
| TBXAS1 | 7347 | pGL4-phTBXAS1 | Human thromboxane A synthase 1 (platelet) | 1,321 bp |
| TERT | 7379 | pGL4-phTERT | Human telomerase reverse transcriptase | 1,341 bp |
| TFF1 | 7511 | pGL4-phTFF1 | Human trefoil factor 1 | 1,256 bp |
| TG | 7304 | pGL4-phTG | Human thyroglobulin | 1,187 bp |
| TGFA | 7348 | pGL4-phTGFA | Human transforming growth factor, alpha | 1,305 bp |
| TH | 7301 | pGL4-phTH | Human tyrosine hydroxylase | 1,180 bp |
| TIMP1 | 7516 | pGL4-phTIMP1 | Human TIMP metalloproteinase inhibitor 1 | 1,352 bp |

List of Promoter Collection (2)

| Locus symbol | RDB No. | Name of clone | Gene of insert | Size of inserted DNA (PCR-amplified) |
|--------------|---------|-----------------------------|---|---|
| TNF | 7310 | pGL4-phTNF | Human tumor necrosis factor (TNF superfamily, member 2) | 1,199 bp |
| TNFRSF10B | 7380 | pGL4-phTNFRSF10B | Human tumor necrosis factor receptor superfamily, member 10b | 1,305 bp |
| TNFRSF10C | 7375 | pGL4-phTNFRSF10C (MGC31957) | Human tumor necrosis factor receptor superfamily, member 10c, decoy without an intracellular domain | 1,326 bp |
| TNNC1 | 7517 | pGL4-phTNNC1 | Human troponin C type 1 (slow) | 1,396 bp |
| TP53 | 7330 | pGL4-phTP53 | Human tumor protein p53 | 1,187 bp |
| TP53AIP1 | 7410 | pGL4-phTP53AIP1 | Human tumor protein p53 regulated apoptosis inducing protein 1 | 1,305 bp |
| TP53TG5 | 7336 | pGL4-phTP53TG5 (C20orf10) | Human chromosome 20 open reading frame 10 | 1,270 bp |
| TP63 | 7350 | pGL4-phTP63 (TP73L) | Human tumor protein p63 | 1,330 bp |
| TP73 | 7381 | pGL4-phTP73 | Human tumor protein p73 | 1,332 bp |
| TRIM22 | 7382 | pGL4-phTRIM22 | Human tripartite motif-containing 22 | 1,317 bp |
| TXN | 7518 | pGL4-phTXN | Human thioredoxin | 1,399 bp |
| VCAN | 7339 | pGL4-phVCAN (CSPG2) | Human versican | 1,186 bp |
| XPC | 7351 | pGL4-phXPC | Human xeroderma pigmentosum, complementation group C | 1,301 bp |

List of Promoter Collection (3)

| Locus | RDB no. | Name of clone | Running title |
|-------|---------|---------------|---|
| Dnmt1 | 3179 | D1 | Reporter construct for mouse Dnmt1 genomic region (-2000/+79) |

List of Promoter Collection (3)

| Locus | RDB no. | Name of clone | Running title |
|---------|---------|----------------------------------|--|
| Dnmt1 | 3180 | D2 | Reporter construct for mouse Dnmt1 genomic region (-220/+79) |
| Dnmt1 | 3181 | D4 | Reporter construct for mouse Dnmt1 genomic region (-120/+79) |
| ERBB2 | 2839 | c-erbB2 promoter(533)-pGL2-basic | Luciferase reportor driven by c-erbB2 |
| ERBB2 | 2840 | c-erbB2 promoter(344)-pGL2-basic | Luciferase reportor driven by c-erbB2 |
| ERBB2 | 2841 | c-erbB2 promoter(251)-pGL2-basic | Luciferase reportor driven by c-erbB2 |
| ERBB2 | 2842 | c-erbB2 promoter(124)-pGL2-basic | Luciferase reportor driven by c-erbB2 |
| FUT7 | 2978 | pFT7prol | Reporter construct for fucosyltransferase VII gene |
| Hes1 | 6775 | HES-1-Luc-Reporter | Reporter construct of the mouse Hairy and enhancer of split 1. |
| Il23a | 6302 | p19-937-Luc | Reporter construct of mouse Il23a gene with firefly luciferase |
| Il23a | 6303 | p19-685-Luc | Reporter construct of mouse Il23a gene with firefly luciferase |
| Il23a | 6304 | p19-584-Luc | Reporter construct of mouse Il23a gene with firefly luciferase |
| Il23a | 6305 | p19-484-Luc | Reporter construct of mouse Il23a gene with firefly luciferase |
| Il23a | 6307 | p19-184-Luc | Reporter construct of mouse Il23a gene with firefly luciferase |
| Il23a | 6308 | p19-83-Luc | Reporter construct of mouse Il23a gene with firefly luciferase |
| Il23a | 6309 | p19-937 mkB-105-Luc | Reporter construct of mouse Il23a gene with firefly luciferase |
| Il23a | 6310 | p19-937 mkB-642-Luc | Reporter construct of mouse Il23a gene with firefly luciferase |
| Il23a | 6311 | p19-937 mkB-642 mkB-105-Luc | Reporter construct of mouse Il23a gene with firefly luciferase |
| Il23a | 6312 | p19-584 mkB-513-Luc | Reporter construct of mouse Il23a gene with firefly luciferase |
| Il23a | 6313 | p19-584 mkB-105-Luc | Reporter construct of mouse Il23a gene with firefly luciferase |
| Il23a | 6314 | p19-184 mkB-105-Luc | Reporter construct of mouse Il23a gene with firefly luciferase |
| Il23a | 6315 | p19-154-Luc | Reporter construct of mouse Il23a gene with firefly luciferase |
| Nes | 3019 | pNesP-4025/-34 | Genomic clone of mouse nestin gene |
| element | 2968 | pTcf7wtluc | Reporter plasmid carrying TCF-binding consensus sequence |

List of Promoter Collection (3)

| Locus | RDB no. | Name of clone | Running title |
|---------|---------|----------------------------------|--|
| element | 2969 | pTcf7mtluc | Reporter plasmid carrying TCF-binding consensus sequence |
| element | 6776 | TP1-luc(981-6) (a.k.a. pGa981-6) | Reporter construct containing the hexamerized 50 bp EBNA2 response element of the TP-1 promoter. |

List of Response element collection

| Name of clone | Running title | Wild-type | | Mutant | |
|--------------------------------|---|-----------|---------|---------|---------|
| | | forward | reverse | forward | reverse |
| pAP1/PMA | Reporter construct of AP1 response element/PMA | 3449 | | 3450 | 3451 |
| p3AP1/PMA(F) | Reporter construct of AP1 response element/PMA | 3452 | 3453 | 3454 | 3455 |
| pCRE | Reporter construct of CRE response element/PMA | 3456 | | 3457 | 3458 |
| p3CRE | Reporter construct of CRE response element/PMA | 3459 | | 3460 | 3461 |
| pDRE(F) | Reporter construct of DRE response element/PMA | 3462 | 3463 | 3464 | 3465 |
| pC/EBP RE-TK hRluc(F) | Reporter construct of C/EBP response element | 5595 | 5658 | 5596 | 5659 |
| pCACCCBox RE-TK hRluc(F) | Reporter construct of CACCCBox(EKLF) response element | 5618 | 5677 | 5619 | |
| pCrAG RE-TK hRluc(F) | Reporter construct of CrAG response element | 5580 | 5644 | 5581 | 5645 |
| pE-Box RE-TK hRluc(F) | Reporter construct of E-Box response element | 5587 | 5652 | 5588 | |
| pE2F RE-TK hRluc(F) | Reporter construct of E2F response element | 5578 | 5642 | 5579 | 5643 |
| pEgr-1 RE-TK hRluc(F) | Reporter construct of Egr-1 response element | 5597 | 5660 | 5598 | 5661 |

List of Response element collection

| Name of clone | Running title | Wild-type | | Mutant | |
|-------------------------------|---|-----------|---------|---------|---------|
| | | forward | reverse | forward | reverse |
| pER RE-TK hRluc(F) | Reporter construct of ER (estrogen receptor) response element | 5626 | 5683 | 5627 | 5684 |
| pEts RE-TK hRluc(F) | Reporter construct of Ets response element | 5602 | 5665 | 5603 | 5666 |
| pFXR RE-TK hRluc(F) | Reporter construct of FXR response element | 5636 | 5695 | 5637 | 5690 |
| pGAS RE-TK hRluc(F) | Reporter construct of GAS(gamma-interferon activation site) response element | 5624 | 5681 | 5625 | 5682 |
| pGATA RE-TK hRluc(F) | Reporter construct of GATA response element | 5599 | | 5600 | 5662 |
| pGR RE-TK hRluc(F) | Reporter construct of GR (glucocorticoid receptor) response element | 5628 | | 5629 | 5685 |
| pHRE-TK hRluc(F) | Reporter construct of HRE(HIF response element) | 5612 | 5673 | | 5613 |
| pHSF RE-TK hRluc(F) | Reporter construct of HSF response element | 5606 | | 5607 | 5669 |
| pHTLV RE-TK hRluc(F) | Reporter construct of HTLV response element | 5584 | 5648 | 5585 | 5649 |
| pISRE-TK hRluc(F) | Reporter construct of ISRE (interferon response element) | 5610 | | 5611 | 5672 |
| pMAREI-TK hRluc(F) | Reporter construct of MAF response elementI | 5693 | 5670 | 5694 | 5671 |
| pMAREII-TK hRluc | Reporter construct of MAF response elementII | 5608 | | 5609 | |
| pMEF2 RE-TK hRluc(F) | Reporter construct of MEF2 response element | 5692 | 5663 | 5601 | 5664 |
| pMyb-Box RE-TK hRluc(F) | Reporter construct of Myb-Box response element | 5591 | 5654 | 5592 | 5655 |
| pN-Box RE-TK hRluc(F) | Reporter construct of N-Box response element | 5589 | 5653 | 5590 | |

List of Response element collection

| Name of clone | Running title | Wild-type | | Mutant | |
|---------------------------------|--|-----------|---------|---------|---------|
| | | forward | reverse | forward | reverse |
| pNF-kappaB RE-TK hRluc(F) | Reporter construct of NF-kappaB response element | 5576 | 5640 | 5577 | 5641 |
| pNFAT RE-TK hRluc(F) | Reporter construct of NFAT response element | 5604 | 5667 | 5605 | 5668 |
| pOCTA RE-TK hRluc(F) | Reporter construct of OCTA response element | 5586 | 5650 | 5691 | 5651 |
| pp53-Box RE-TK hRluc(F) | Reporter construct of p53-Box response element | 5593 | 5656 | 5594 | 5657 |
| pRAR RE-TK hRluc(F) | Reporter construct of RAR (retinoic acid receptor) response element | 5634 | 5688 | 5635 | 5689 |
| pSmad RE-TK hRluc(F) | Reporter construct of Smad response element | 5622 | 5679 | 5623 | 5680 |
| pSP-1 RE-TK hRluc(F) | Reporter construct of SP-1 response element | 5574 | 5638 | 5575 | 5639 |
| pSRE-TK hRluc(F) | Reporter construct of SRE (serum response element) | 5582 | 5646 | 5583 | 5647 |
| pSTAT RE-TK hRluc(F) | Reporter construct of STAT response element | 5616 | | 5617 | 5676 |
| pTCCBox RE-TK hRluc(F) | Reporter construct of TCCBox(SMYD3) response element | 5620 | | 5621 | 5678 |
| pTCF RE-TK hRluc(F) | Reporter construct of TCF response element | 5614 | 5674 | 5615 | 5675 |
| pTR RE-TK hRluc(F) | Reporter construct of TR (thyroid hormone receptor) response element | 5630 | | 5631 | 5686 |
| pVDR RE-TK hRluc(F) | Reporter construct of VDR (vitamin D receptor) response element | 5632 | | 5633 | 5687 |

5. cDNA クローンセット (cDNA Clone Set)

(1) Genome Network Project Human Full-Length cDNA Clone Set

<http://dna.brc.riken.jp/ja/GNPcloneja.html>

http://dna.brc.riken.jp/search/RDB_hum/RDB_hum_A.html

Genome Network Project Human Full-Length cDNA Clone Set は、文部科学省「ゲノムネットワークプロジェクト」で収集・整備したヒト完全長 cDNA クローンから構成されています。個別クローンでの提供をしています。

ゲノムネットワークプロジェクトクローンは、次の2種類です。

1) ヒト完全長 cDNA コレクション

東京大学の菅野純夫教授ならびに理化学研究所の林崎良英領域長のグループが収集・整備。ヒトの全遺伝子の6割に相当するおよそ14,000遺伝子、約3万クローン。

2) Gateway® エントリークローン

ヒト完全長 cDNA コレクションから抜粋した6,300遺伝子分、約5万クローン。Gateway® エントリークローンのインサートDNAは、Gateway® テクノロジーにより種々のデスティネーションベクター(発現ベクター)へ簡単に移入することができます。なお、Gateway® エントリークローンには、独立行政法人新エネルギー・産業技術総合開発研究機構「完全長 cDNA 構造解析プロジェクト」において、バイオテクノロジー開発技術研究組合が作製したヒト cDNA クローンから作製したクローンも含まれています。

※これらのヒト完全長 cDNA クローンをを用いたプロジェクトの成果は、下記論文で発表され、クローンの詳細情報やタンパク質発現情報等がゲノムネットワークプロジェクトの公開データベース(ゲノムネットワークプラットフォーム, <http://genomenetwork.nig.ac.jp/>)から公開されています。

※Gateway® テクノロジーについてはLife Technologies社のサイト

(<http://www.invitrogen.co.jp/gateway/index.shtml>)をご参照ください。

※Gateway® はLife Technologies社の登録商標です。

※「完全長 cDNA 構造解析プロジェクト」にて取得されたヒト cDNA クローンについては、「独立行政法人製品評価技術基盤機構(NITE)」の「バイオテクノロジー分野(NBRC)」ホームページ(<http://www.nbrc.nite.go.jp/>)をご覧ください。

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(2) NRCD Human Full-Length cDNA Cloned Library

<http://dna.brc.riken.jp/ja/NRCDhumja.html>

http://dna.brc.riken.jp/search/NRCDhum/NRCD_A.html

国立障害者リハビリテーションセンター研究所にて開発され、解析が行われました。下記論文に掲載されたクローンが提供可能です。

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Oshikawa M, Sugai Y, Usami R, Ohtoko K, Toyama S, Kato S. Fine expression profiling of full-length transcripts using a size-unbiased cDNA library prepared with the vector-capping method. DNA Res. 15 (3), 123-136, 2008.

Oshikawa M, Tsutsui C, Ikegami T, Fuchida Y, Matsubara M, Toyama S, Usami R, Ohtoko K, Kato S. Full-length transcriptome analysis of human retina-derived cell lines ARPE-19 and Y79 using the vector-capping method. Invest Ophthalmol Vis Sci. 52 (9), 6662-6670, 2011.

(3) NIA/NIH Mouse EST Cloned Library

<http://dna.brc.riken.jp/ja/NIAclones/mouse15k.html>

http://dna.brc.riken.jp/search/RDB_mus/RDB_mus_A.html

NIA/NIH Mouse cDNA Clone Set は、マウス各発生初期段階特異的 15 K cDNA クローンセット (NIA Mouse 15 K cDNA Clone Set)ならびに、NIA Mouse 15 K cDNA Clone Set と重複のない 7.4 K cDNA クローンセット(NIA Mouse 7.4 K cDNA Clone Set)から構成さ

れています。セットならびに個別クローンでの提供をしています。

References

Web Page: <http://lgsun.grc.nia.nih.gov/>

Original Papers

NIA mouse 15K cDNA clone set

- 1 Tanaka et al., Proc. Natl. Acad. Sci. USA 97, 9127-9132 (2000) [PMID:10922068]
- 2 Kargul et al., Nature Genetics 28, 17-18 (2001) [PMID:11326268]

NIA mouse 7.4K cDNA clone set

- 1 VanBuren et al., Genome Res 12, 1999-2003 (2002) [PMID:12466305]

(4) ERATO Embryo EST Cloned Library

http://dna.brc.riken.jp/ja/mouse_erato.html

Preimplantation Mouse Embryonic cDNA clone は ERATO 土居バイオアシメトリプロジェクト事業により樹立されたもので、45,216 株のマウス cDNA クローンから構成されています。個別クローンでの提供をしています。

References

- 1 J.R. Kitchen et al. (1997) Systematic Analyses of Genes Expressed in 3.5 dpc Mouse Blastocyst. Abstracts of 1997 meeting on Mouse Molecular Genetics; p. 128.
- 2 M.S.H. Ko et al. (1998) Sequencing and Mapping of Genes Expressed in Mouse Embryos from Preimplantation Stages (from Unfertilized Egg to Blastocyst). Abstracts of the 12th International Mouse Genome Conference; B26.

(5) NBRP *X. laevis* and *tropicalis* EST Cloned Library

http://dna.brc.riken.jp/ja/xenopus_ja.html

東京大学ならびに国立基礎生物学研究所にて開発され、解析が行われました。RDB 6129 と 6726 は、発現ベクターとして利用可能です。

| Cat. # | Library | Clones |
|----------|--|--------------------------|
| RDB 6075 | <i>X. tropicalis</i> embryo EST clones | (ex. st10a01) |
| RDB 6129 | <i>X. laevis</i> anterior neuroectoderm EST clones | (ex. XL410a01ex) |
| RDB 6235 | <i>X. laevis</i> anterior endomesoderm EST clones | (ex. xlk51a01) |
| RDB 6726 | <i>X. laevis</i> Keller explans EST clones | XL221a01ex to XL341p24ex |
| RDB 6727 | <i>X. laevis</i> whole embryo(stage 10.5) EST clones | XL111a01 to XL220p24 |
| RDB 6728 | <i>X. laevis</i> whole embryo(stage 15) EST clones | XL001a01 to XL050p24 |
| RDB 6729 | <i>X. laevis</i> whole embryo(stage 25) EST clones | XL051a01 to XL110p24 |

(6) NBRP *Ciona intestinalis* EST Cloned Library

http://dna.brc.riken.jp/ja/NBRPCiona_ja.html

京都大学にて開発され、解析が行われました。京都大学が提供するウェブサイトから目的遺伝子のクローンの検索ができます。

<http://ghost.zool.kyoto-u.ac.jp/SearchGenomekh.html#CDNA>

| Cat. # | Library | Library ID | Clones |
|----------|------------------|------------|---|
| RDB 6734 | Egg | CiEG | cieg001a01-cieg101p24 |
| RDB 6732 | Cleaving embryo | CiCL | cicl001a01-cicl022p24 cicl024a01-cicl105p24 |
| RDB 6738 | Gastrula/Neurula | CiGN | cign001a01-cign081p24 |
| RDB 6745 | Tailbud embryo | CiTB | citb001a01-citb105p24 |
| RDB 6741 | Larva | CiLV | cilv001a01-cilv090p24 |
| RDB 6730 | Young adult | CiAD | ciad001a01-ciad020p24 ciad024a01-ciad103p24 |
| RDB 6737 | Gonad | CiGD | cigd001a01-cigd049p24 |
| RDB 6746 | Testis | CiTS | cits001a01-cits050p24 |
| RDB 6735 | Endostyle | CiES | cies001a01-cies009p24 |
| RDB 6744 | Neural complex | CiNC | cinc001a01-cinc034p24 |
| RDB 6739 | Heart | CiHT | ciht001a01-ciht042p24 |
| RDB 6731 | Blood cells | CiBD | cibd001a01-cibd085p24 |
| RDB 6736 | Embryo mix | CiEM | ciem801a01-ciem854p24 |
| RDB 6740 | Juvenile | CiJV | cjv001a01-cjv051p24 cjv201a01-cjv227p24 cjv401a01-cjv430p24 |
| RDB 6733 | Digestive Gland | CiDG | cidg001a01-cidg007p24 cidg801a01-cidg851p24 |
| RDB 6742 | Mature adult | CiMA | cima001a01-cima041p24 cima044a01-cima056p24 |
| RDB 6743 | Mature adult | CiMA | cima801a01-cima854p24 |

6. ゲノムクローンセット (Genomic Clone Set)

(1) RIKEN C57BL/6N (B6N) Mouse BAC Cloned Library

<http://dna.brc.riken.jp/ja/NBRPB6Nbacja.html>

B6N マウス BAC ライブラリーは理研 BRC が作製し、「NBRP ゲノム情報等整備プログラム」により国立遺伝学研究所と共同でクローン末端配列を決定しました。C57BL/6N 系統 (*Mus musculus domesticus*) ゲノムクローン約 12 万 8 千株の BAC クローンから構成されており、実質ゲノム被覆度は 90.2%です。

ホームページで紹介する検索プログラムを用い、キーワード検索により、目的遺伝子を含むクローンの検索が可能です。

C57BL/6N 系統から樹立された ES 細胞株も理研 BRC 細胞材料開発室から提供されています。この ES 細胞を用いて作製したキメラマウスから ES 細胞由来の個体が生まれることも確認済みです。合わせてご利用下さい。

http://www.brc.riken.jp/lab/animal/mailnews/nm200909_02.html

(2) RIKEN MSM/Ms Mouse BAC Cloned Library

<http://dna.brc.riken.jp/ja/MSMbac.html>

熊本大学ならびに理研 BRC で作製され、理研 GSC によるゲノム解析 (NBRP ゲノム情報等整備プログラムによる) が行われました。

ホームページで紹介する検索プログラムを用い、キーワード検索により、目的遺伝子を含むクローンの検索が可能です。

(3) NBRP Rat BAC Cloned Library

<http://dna.brc.riken.jp/ja/NBRPratja.html>

京都大学にて開発され、理研 GSC によるゲノム解析 (NBRP ゲノム情報等整備プログラムによる) が行われました。

ホームページで紹介する検索プログラムを用い、キーワード検索により、目的遺伝子を含むクローンの検索が可能です。

<http://analysis2.lab.nig.ac.jp/cgi-bin/gbrowse/rat/>

(4) NBRP Japanese Macaque BAC Cloned Library

<http://dna.brc.riken.jp/ja/macaque.html>

岡崎国立共同研究機構・生理学研究所にて開発され、理研 GSC によりゲノム解析

(NBRP ゲノム情報等整備プログラムによる)が行われました。

ホームページで紹介する検索プログラムを用い、キーワード検索により、目的遺伝子を含むクローンの検索が可能です。

(5) CEPH Human MEGA YAC Cloned Library

<http://dna.brc.riken.jp/ja/cephyac/yac.html>

Fondation Jean Dausset - CEPH 研究所より寄託されました。

D-number (例 D2S160)により STS サイトからクローンを検索することが可能です。個別の YAC クローンとして提供しています。

<http://www.cephb.fr/common/infoclone.html>

(6) RIKEN Human Chromosome Specific Genomic Cloned Library

<http://dna.brc.riken.jp/ja/hum21ch.html>

理研 GSC によ樹立されました。染色体をサイズにより分画し、クローニングベクターに組込んでいます。

(7) RIKEN Chimpanzee Chromosome 22 Cloned Library

<http://dna.brc.riken.jp/ja/hum21ch.html>

理研 GSC によ樹立されました。

7. ライブラリー (Library)

<http://dna.brc.riken.jp/ja/libraryja.html>

当開発室ではクローン化された遺伝子材料のみではなく、ライブラリーも扱っています。
各ライブラリーの詳しい情報はホームページをご覧ください。

List of Library

| Cat. # | Type | Library Name | |
|----------|--------------|--|---------------------------------------|
| RDB 1864 | cDNA library | cDNA library of mixed-stage <i>C. elegans</i> for yeast two-hybrid screening | |
| RDB 2148 | cDNA library | KKF pre-T cell line cDNA library. | |
| RDB 8300 | cDNA library | Equine brain microvascular endothelial cell cDNA library | |
| RDB 2891 | cDNA library | Human Hela cell | Nojima cDNA Library Collection No.01. |
| RDB 2918 | cDNA library | Human HeLa cell, log. | Nojima cDNA Library Collection No.28. |
| RDB 2922 | cDNA library | Human HeLa cell | Nojima cDNA Library Collection No.32. |
| RDB 2892 | cDNA library | Human brain cell | Nojima cDNA Library Collection No.02. |
| RDB 2907 | cDNA library | Human brain | Nojima cDNA Library Collection No.17. |
| RDB 2911 | cDNA library | Human brain | Nojima cDNA Library Collection No.21. |
| RDB 2894 | cDNA library | Human keratinocyte | Nojima cDNA Library Collection No.04. |
| RDB 2896 | cDNA library | Human TIG-1 cell, contact inhibition state. | Nojima cDNA Library Collection No.06. |
| RDB 2900 | cDNA library | Human KD cell, 4-12hr. | Nojima cDNA Library Collection No.10. |
| RDB 2905 | cDNA library | Human KD cell 0hr. | Nojima cDNA Library Collection No.15. |
| RDB 2909 | cDNA library | Human KD cell T/C (4, 8, 12h). | Nojima cDNA Library Collection No.19. |
| RDB 2916 | cDNA library | Human KD cell T/C (4, 8, 12h). | Nojima cDNA Library Collection No.26. |
| RDB 2901 | cDNA library | Human HUVEC (shear stress) | Nojima cDNA Library Collection No.11. |
| RDB 2906 | cDNA library | Human HUVEC (Log). | Nojima cDNA Library Collection No.16. |
| RDB 2920 | cDNA library | Human HUVEC (Log). | Nojima cDNA Library Collection No.30. |
| RDB 2924 | cDNA library | Human HUVEC (Log). | Nojima cDNA Library Collection No.34. |
| RDB 2917 | cDNA library | Human skeletal muscle | Nojima cDNA Library Collection No.27. |
| RDB 2897 | cDNA library | Mouse cartilage | Nojima cDNA Library Collection No.07. |
| RDB 2893 | cDNA library | Mouse testis | Nojima cDNA Library Collection No.03. |
| RDB 2908 | cDNA library | Mouse testis | Nojima cDNA Library Collection No.18. |
| RDB 2923 | cDNA library | Mouse adult testis | Nojima cDNA Library Collection No.33. |
| RDB 2895 | cDNA library | Mouse thymocyte, X-ray Time course Mix. | Nojima cDNA Library Collection No.05. |
| RDB 2903 | cDNA library | Mouse 10T-1/2 | Nojima cDNA Library Collection No.13. |

List of Library

| Cat. # | Type | Library Name | |
|----------|--------------|---|---------------------------------------|
| RDB 2910 | cDNA library | Mouse thymocyte | Nojima cDNA Library Collection No.20. |
| RDB 2912 | cDNA library | Mouse thymocyte | Nojima cDNA Library Collection No.22. |
| RDB 2919 | cDNA library | Mouse thymocyte, X-ray, T/C. | Nojima cDNA Library Collection No.29. |
| RDB 2921 | cDNA library | Mouse 10T-1/2 | Nojima cDNA Library Collection No.31. |
| RDB 2902 | cDNA library | Rat embryonic fibroblast | Nojima cDNA Library Collection No.12. |
| RDB 2899 | cDNA library | SHR Brain | Nojima cDNA Library Collection No.09. |
| RDB 2904 | cDNA library | ES cells | Nojima cDNA Library Collection No.14. |
| RDB 2915 | cDNA library | S. cerevisiae, S288C (Log) | Nojima cDNA Library Collection No.25. |
| RDB 2925 | cDNA library | S. cerevisiae, S288C (Log). | Nojima cDNA Library Collection No.35. |
| RDB 2913 | cDNA library | S. pombe, CD16-1(H+/h-) N-(T/C). | Nojima cDNA Library Collection No.23. |
| RDB 2927 | cDNA library | S. pombe, CD16-1(H+/h-) N-(T/C). | Nojima cDNA Library Collection No.37. |
| RDB 2929 | cDNA library | S. pombe, CD16-1(H+/h-) N-(T/C). | Nojima cDNA Library Collection No.39. |
| RDB 2926 | cDNA library | S. pombe h-L972 Early-Log. | Nojima cDNA Library Collection No.36. |
| RDB 2928 | cDNA library | S. pombe h-L972, +HU, gamma irradiated. | Nojima cDNA Library Collection No.38. |
| RDB 2930 | cDNA library | S. pombe h-L972, +HU, gamma irradiated. | Nojima cDNA Library Collection No.40. |

文献: Kobori M. et al., Genes to Cells 3, 459-475 (1998) [PMID: 9753427]
 Takemoto Y. et al., EMBO J. 14, 3403-3414 (1995) [PMID: 7628441]
 Abstracts for 20th Annual Meeting of Mol. Biol. Society of Japan, 2JP435 (1997)
 Fujii T. et al., Genomics 57, 94-101(1999) [PMID: 10191088]
 Tanaka Y., et al., FEBS Lett. 472, 254-258 (2000)[PMID: 10788621]
 Kitagawa K., et al., Genomics, 30, 257-263 (1995) [PMID: 8586425]

8. ゲノム DNA (Genomic DNA)

(1) 理研 BRC-JCM 株由来微生物ゲノム DNA

<http://dna.brc.riken.jp/ja/JCMDNA.html>

理研 BRC-JCM に保存されている微生物株を微生物材料開発室で培養し、当開発室で抽出したゲノム DNA です。

(2) 理研 BRC マウス由来ゲノム DNA

<http://dna.brc.riken.jp/ja/BRCmgenomeja.html>

理研 BRC 実験動物開発室より受け取ったマウスより抽出したゲノム DNA です。