

# **An Informatics Search for the Low-Molecular Weight Chromium-Binding Peptide**

Deendayal Dinakarandian,<sup>1</sup> Vincent Morrissette, Shveta Chaudhary, Kambiz Amini, Brian Bennett,<sup>2</sup> J. David Van Horn\*

Department of Chemistry, University of Missouri-Kansas City, 5110 Rockhill Road, Kansas City, MO 64110, USA.

<sup>1</sup> Division of Computer Science and Electrical Engineering, School of Computing and Engineering, University of Missouri-Kansas City, Kansas City, MO 64110, USA.

<sup>3</sup> National Biomedical EPR Center, Medical College of Wisconsin, Milwaukee, WI 53226 USA.

\*Corresponding author

Email addresses:

DD: [dinakard@umkc.edu](mailto:dinakard@umkc.edu)

VM: [morrissettev@umkc.edu](mailto:morrissettev@umkc.edu)

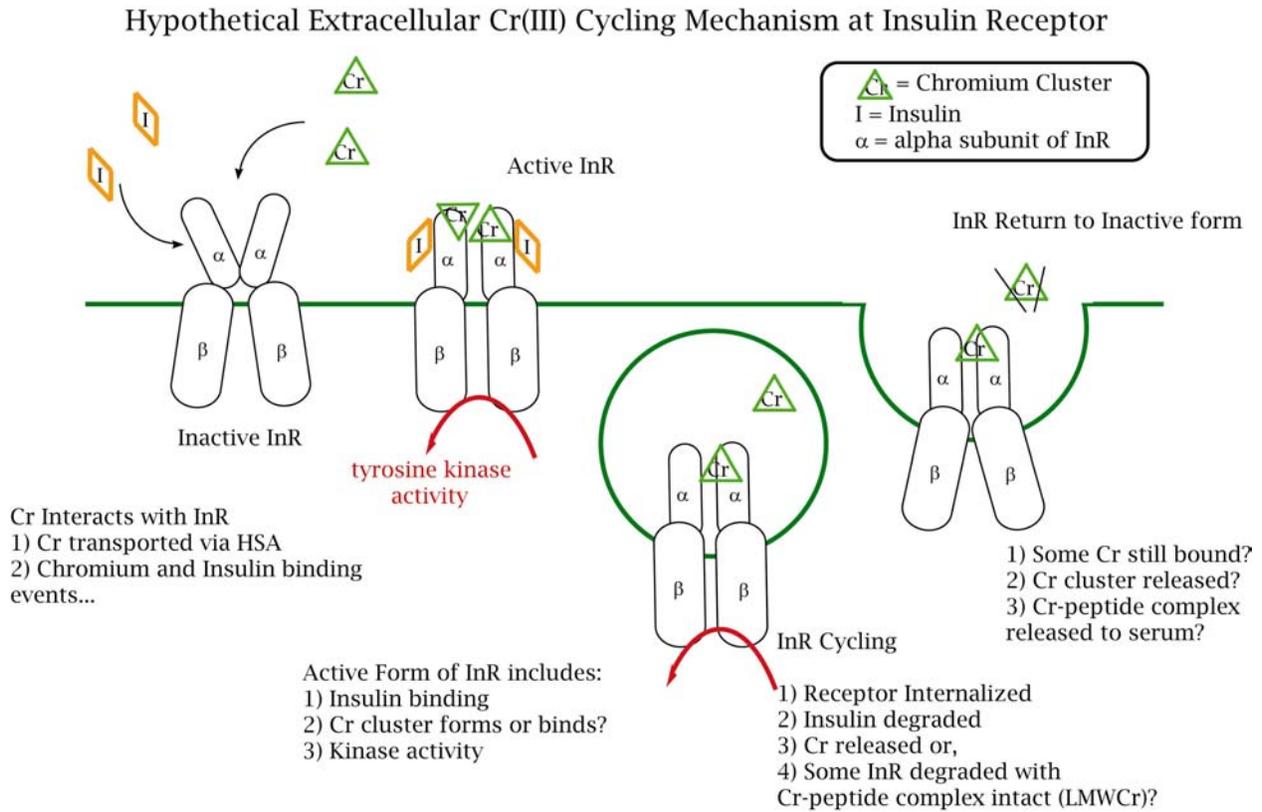
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KA: [kaz54@umkc.edu](mailto:kaz54@umkc.edu)

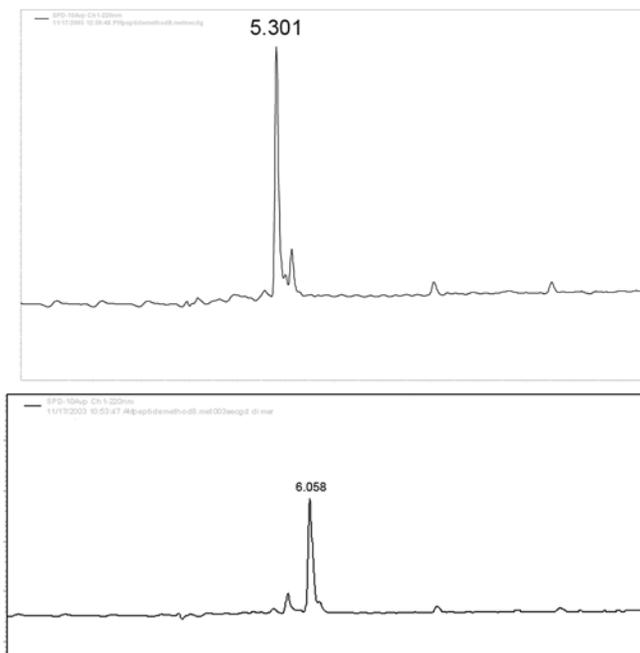
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JDVH: [vanhornd@umkc.edu](mailto:vanhornd@umkc.edu)

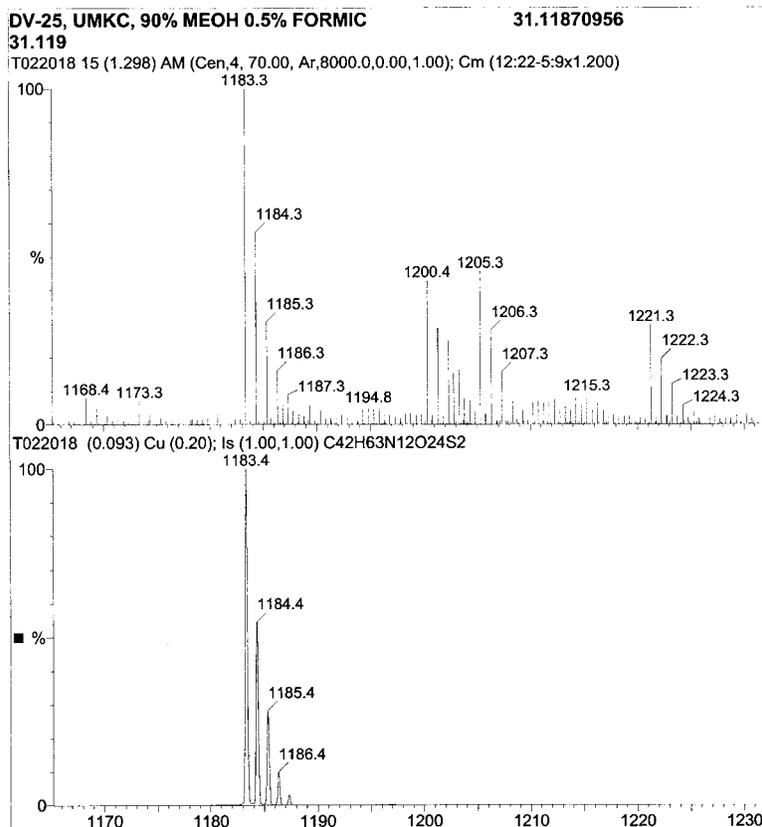
# Supporting Figures



**Figure S1**  
 Hypothetical Extracellular Cr(III) Cycling Mechanism at Insulin Receptor. Details of Cr(III) serum transport and interactions with serum proteins is not specified in this Figure.



**Figure S2.** HPLC traces of Ac-EECGD-CONH<sub>2</sub> (top) and disulfide dimer. See experimental section for conditions.



**Figure S3**  
 ESI-MS spectrum of (AcEECGD-CONH<sub>2</sub>)<sub>2</sub>.

## Supporting Materials and Methods:

**Comparison to other sequences related to “insulin”.** All protein sequences derived from SwissProt for the search, “insulin human”, were compiled and compared for sequence analogy (83 entries) and for duplicates in **Table S2** (5 duplicates). Of the remaining 78 entries, only IGR1 (see text), has sequence similarity to EECGD.

# Supporting Tables

**Table S1.**

Sequence information used in this study for proteins related to the insulin signaling pathway (20 entries). Sequences related to “insulin human” (78 entries), derived from SwissProt, are not shown.

|   |   |
|---|---|
| 1 | <p>&gt;sp P01308 INS_HUMAN Insulin precursor - Homo sapiens (Human).<br/>MALWMRLLPLLALLLWGPDPAAAFVNQHLCGSHLVEALYLVCGERGFFYTPKTRREAED<br/>LQVGGVELGGGPGAGSLQPLALEGSLQKRGIVEQCCTSICSLYQLENYCN</p>   |
| 2 | <p>&gt;sp P06213 INSR_HUMAN Insulin receptor precursor (EC 2.7.1.112) (IR) (CD220 antigen) - Homo sapiens (Human).<br/>MGTGGRRGAAAAPLLVAVAALLLGAAGHLYPGEVCPGMDIRNNLRLHELENCVIEGHL<br/>QILLMFKTRPEDFRDLSFPKLIMITDYLLLFVYGLSESLKDLFPNLTVIRGSRFLFNAL<br/>VIFEMVHLKELGLYNLMNITRGSVRIEKNNECYLATIDWSRILDSVEDNYIVLNKDDNE<br/>ECGDICPGTAKGKTNCPATVINGQFVERCWTSHCQKVCPTICKSHGCTAEGLCCHSECL<br/>GNCSQPDDPTKCVACRNFYLDGRCVETCPPPYHFQDWRCVNFSCQDLHHKCKNSRRQG<br/>CHQYVIHNNKCIPECPGTYMNSSNLLCTPCLGPCPKVCHLLEGEKTIIDSVTSAQELRGC<br/>TVINGSLIINIRGGNNLAAELEANLGLIEEISGYLKIIRSYALVLSLFFRKLRLRIGETL<br/>EIGNYSFYALDNQNLRLQLDWDSKHNLTQTQKLFHYNPKLCLSEIHKMEEVSGTKGRQE<br/>RNDIALKTNGDKASCENELKFSYIRTSFDKILLRWEFYWPPDFRDLGFMFLFYKEAPYQ<br/>NVTEFDGQDACGSNSWTVVDIDPPLRSNDPKSQNHGWLWRGLKWPQYAFVKTIVTFS<br/>DERRTYGAKSIIYVQTDATNPSVPLDFISVSNSSSQIILKWKPPSDPNGNITHYLVFWE<br/>RQAEDELFECLDYCLGKLPKLPRTWSPFSESDSQKHNSQSEYEDSAGECCSCPCTDSQIL<br/>KELEESSFRKTFEDYLHNVVVFPKRTSSGTGAEDPRPSRKRSLGVDVGNVTVAAPTVAAF<br/>PNTSSTSVPTSPEEHRPFKVVNKESLVISGLRHFTGYRIELQACNQDTPPEERCSVAAYV<br/>SARTMPEAKADDIVGPVTHEIFENNVVHLMWQEPKEPNGLIVLYEVSRYRYGDEELHLCV<br/>SRKHFALERGCRLRGLSPGNYSVRIRATSLAGNGSWTEPTYFYVTDYLDVPSNIAKIIIG<br/>PLIFVFLFSVVIIGSIYLFVLRKRQPDGPLYASSNPEYLSASDVFPSCSVYVPDEWEVSR<br/>EKITLLRELGGSGFMVYEGNARDIIKGEAETRVAVKTVNESASLRERIEFLNEASVMKG<br/>FTCHHVRLGVSQKQPTLVVMEMLAHGDLKSYLRSRPEAENNGRPPPTLQEMIQMA<br/>AEIADGMAYLNAKKFVHRDLAARNCMVAHDFTVKIGDFGMTRDIYETDYRKGKGLLPV<br/>RWMAPESLKDGVFTTSSDMWSFGVVLWEITSLAEQPYQGLSNEQVLFVMDGGYLDQPDN<br/>CPERTDLMRMCWQFNPKMRPTFLEIVNLLKDDLHPSFPEVSFFHSEENKAPESSELEME<br/>FEDMENVPLDRSSHQCQREEAGRDGSSSLGFKRSYEEHIPYTHMNGGKKNGRILTLPRSN<br/>PS</p> |
| 3 | <p>&gt;sp P14672 GTR4_HUMAN Solute carrier family 2, facilitated glucose transporter, member 4 (Glucose transporter type 4, insulin-responsive) - Homo sapiens (Human).<br/>MPSGFQQIGSEDEPPQQRVTGTLVLAVFSAVLGSLQFGYNIGVINAPQKVIEQSYNETW<br/>LGRQGPPEGPSSIPPGLTTLWALSVAIFSVGGMISFLIGIISQWLGRKRAMLVNNVLA<br/>LGGSLMGLANAASAYEMLILGRFLIGAYSGLTSGLVPMYVGEIAPTHLRGALGTLNQLAI<br/>VIGILIAQVLGLESLLGTASLWPLLGLTVLPALLQLVLLPFCPEsprlyIIQNLEGPA<br/>RKSLKRLTGWADVSGVLAELKDEKRKLERERPLSLQLLGSRTHRQPLIIAVVLQLSQQL<br/>SGINAVFYSTSI FETAGVGPAYATIGAGVVNTVFTLVSVLLVERAGRRTLHLLGLAGM<br/>CGCAILMTVALLLLERVPAMSYVSIIVAFGFVAFFEIGPGPIPWFIIVAELEFSQGRPAAM<br/>AVAGFSNWTNSFIIGMGFYVAEAMGPYVFLFAVLLLGFFIFTFLRVPETRGRTFDQIS<br/>AAFHRTPSLLEQEVKPESTELEYLGPDEND</p>  |
| 4 | <p>&gt;sp P42336 P11A_HUMAN Phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit, alpha isoform (EC 2.7.1.153) (PI3-kinase p110 subunit alpha) (PtdIns-3-kinase p110) (PI3K) - Homo sapiens (Human).<br/>MPPRPSSGELWGIHLMPPRILVECLLPNGMIVTLECLREATLVTIKHELKFEARKYPLHQ<br/>LLQDESSYIFVSVTQEAEREFFDETRRLCDLRLFPFLKVIIEPVGNRREKILNREIGFA<br/>IGMPVCEFDMVKDPEVQDFRRNILNVCKEAVDLRDLNSPHSRAMYVYPHVESSPELPKH<br/>IYNKLDRGQIIIVVIWIVSPNNDKQKYTLKINHDCVPEQVIAEAIKKTTRSMLLSSEQLK<br/>LCVLEYQGYILKVCGCDEYFLEKYPLSQYKIRSCIMLGRMPNLKMMAKESLYSQLPMD<br/>CFTMPYSRRISTATPYMNGETSTKSLWVINRALRIKILCATYVNLNIRDIDKIYVRTGI<br/>YHGGEPLCDNVNTQRVPCSNPRWNEWLNLDIYIPDLPRARLCLSCSVKGRKGAKKEEHC<br/>PLAWGNINLFDYTDTLVSGKMALNLWVPVPHGLEDLNPIGVTSNPNKETPCLELEFDWF</p>   |

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|   | <p>SSVVKFPDMSVIEEHANWSVSREAGFSYSHAGLSNRLARDNELRENDKEQLKAISTRDPL<br/>SEITEQEKDFLWSHRHYCVTIPEILPKLLLSVKWNSRDEVAQMYCLVKDWPPIKPEQAME<br/>LLDCNYPDPMVRGFAVRCLEKYLTDKLSQYLIQLVQVLKYEQYLDNLLVRFLLKKALTN<br/>QRIGHFFFWHLKSEMHNKTVSQRFGLLLESYCRACGMYLKHLNRQVEAMEKLINLTDILK<br/>QERKDETKQVQMKFLVEQMRRPDMDALQGLLSPLNPAHQGLGNLRLKECRIMSSAKRPLW<br/>LNWENPDIMSELLFQNEIIFKNGDDLQDMLTLQIIRIMENIWQNQGLDLRMLPYGCLS<br/>IGDCVGLIEVVRNSHTIMQIQCKGGLKALQFNSTLHQWLKDKNKGEIYDAAIDLFTRS<br/>CAGYCVATFILGIGDRHNSNIMVKDDGQLFHIDFGHFLDHKKKFKGYKRERVPVLTQDF<br/>LIVISKGAQECTKTREFERFQEMCYKAYLAIRQHANLFINLFSMMLGSGMPELQSFDDIA<br/>YIRKTLALDKTEQEALEYFMKQMNDAHHGGWTTKMDWIFHTIKQHALN</p>  |
| 5 | <p>&gt;sp Q9Y4H2 IRS2_HUMAN Insulin receptor substrate-2 (IRS-2) - Homo sapiens (Human).<br/>MASPPRHGPPGPASGDGPNLNNNNNNNSVRKCGYLKQKHGHRKRFVLRGPGAGGDKA<br/>TAGGGSAPQPPRLEYESEKNWRSKAGAPKRVIALDCCLNINKRADPKHKYLIALLYTKDE<br/>YFAVAEENEQEQEGWYRALTDLVSEGRAAAAGDAPAAAAPAASCSASLPGAVGGSAGAAGA<br/>EDSYGLVAPATAAYREVWQVNLKPKGLGQSKNLTGVYRLCLSARTIGFVKLNCEQPSVTL<br/>QLMNIRRCGHSDSFFFIEVGRSAVTGPGEIWMQADDSVVAQNIHETILEAMKALKELFEF<br/>RPRSKSQSSGSSATHPI SVPGARRHHHLVNLPPSQTGLVRRSRTDSLAATPPAAKCSSCR<br/>VRTASEGDGGAAGAAAAGARPVSVAGSPLSPGPVRAPLRSRSHLIGGCRAAGTKWHCFP<br/>AGGGLQHSRSMSPVEHLPPAATSPGSLSSSSDHGWSYPPPPGPHPLPHPLHHGPGQR<br/>PSSGSASASGSPDPGFMSLDEYGS SPGDLRAFCSHRSNTPESIAETPPARDGGGGGEFY<br/>GYMTMDRPLSHCGRSYRRVSGDAAQDLDRGLRKRYSLTTPARQRPVQPSSASLDEYTL<br/>MRATFSGSAGRLCPCSPASSPKVAYHPYPEDYGDIEIGSHRSSSSNLGADDGYMPTPGA<br/>ALAGSGSGSCRSDDYMPMSPASVSAPKQILQPRAAAAAAAVPFAGPAGPAPTFAGRTF<br/>PASGGYKASSPAESSPEDSGYMRMWCCKLSMEHADGKLLPNGDYLVNPSDAVTTGTP<br/>PDDFSAALHPGGEPLRGVPGCCYSSLPKSYKAPYTCGGSDSQYVLMSSPVGRILEEERLE<br/>PQATPGPTQAASAFGAGPTQPPHPVVPSPVVRPSGGREPEGLGQRGRAVRPTRLSEGLPS<br/>LPSMHYPLPPEPKSPGEYINIDFGEFGARLSPAPPLLASAASSSSLLSASSPALSLSGS<br/>GTPGTSSDSRQRSPLSDYMNLDFFSPKSPKPGAPSGHPVGSGLDGLLSPASSPYPLPPR<br/>PSASPSSSLQPPPPPPAPGELYRLPPASAVATAQPGAASSLSSDTGDNGDYTEMAFGVA<br/>ATPPQPIAAPPKPEARVASPTSGVKRLSLMEQVSGVEAFLQASQPPDPHRGAKVIRADP<br/>QGGRRRHSSETFSSTTTVTPVSPFAHNPKRHNSASVENVSLRKSSEGGVGVGPGGDEP<br/>PSPRQLQAPAPPLAPQGRPWTGQPGGLVGCPSGSGSPMRRETSAGFQNLKYIAIDVRE<br/>EPGLPPQPPPPPLPQPGDKSSWGRTRSLGGLISAVGVGSTRGGCGGPGGAPAPCPTT<br/>YAQH</p> |
| 6 | <p>&gt;sp P29354 GRB2_HUMAN Growth factor receptor-bound protein 2 (GRB2 adapter protein) (SH2/SH3 adapter GRB2) (ASH protein) - Homo sapiens (Human), and Rattus norvegicus (Rat).<br/>MEAIKDYDFKATADELSFKRGDILKVLNEECDQNWYKAELNGKDFIPKNIYEMKPHPW<br/>FFGKI PRAKAEEMLSKQRHDGAFILRESE SAPGDFLSVKFGNDVQHFVLRDAGKYFL<br/>WVVKFNSLNELVDYHRSTSVSRNQQIFLRDIEQVPQQPTYVQALFDFDPQEDGELGFRRG<br/>DFIHVMDNSDPNWWKGACHGQTGMFPRNYVTPVNRNV</p>   |
| 7 | <p>&gt;sp P29353 SHC_HUMAN SHC transforming protein - Homo sapiens (Human).<br/>MDLLPKPKYNPLRNESLSSLEEGASGSTPPEELPSPSASSLGPILPPLPGDSDPTTLC<br/>FFPRMSNLRANPAGGRPGSKGEPGRAADDGEGIDGAAMPESGPLPLLQDMNKLSGGGR<br/>RTRVEGGQLGGEWTRHGSFVNKPTRGWLHPNDKVMGPGVSYLVRYMGCVEVLQSMRALD<br/>FNTRTQVTREAI SLVCEAVPGAKGATRRRKPCSRPLSSILGRSNLKFAGMPITLTVSTSS<br/>LNLMAADCKQIIANHHMQSISFASGGDPDTAEYVAVYAKDPVNQRACHILECPEGLAQDV<br/>ISTIGQAFELRFKQYLRNPPKLVTPHDMAGFDGSAWDEEEEEPPDHQYNDPFGKEPPL<br/>GGVDMRLREGAAPGAARPTAPNAQTPSHLGATLPVQGPVGGDPEVRKQMPPPPCPGRE<br/>LFDDPSYVNVQNLDKARQAVGGAGPPNPAINGSAPRDLFDMKPFEDALRVPPPPQSVSMA<br/>EQLRGEFPWFHGKLSRREAEALLQLNGDFLVRESTTTPGQYVLTGLQSGQPKHLLLVDFEG<br/>VVRTKDRHFESVSHLISYHMDNHLPIISAGSELCLQQPVERKL</p>   |
| 8 | <p>&gt;sp Q07889 SOS1_HUMAN Son of sevenless protein homolog 1 (SOS-1) - Homo sapiens (Human).<br/>MQAQQPLPYEFFSEENAPKWRGLLVPALKKVVQGVHPTLESNDALQYVEELILQLNMLC<br/>QAQPRASDVEERVQKSFPHPIDKWAIDAAQSAIEKRKRNRNPLSLPVEKIHPLLKEVLGY<br/>KIDHQVSVYIVAVLEYISADILKLVGNVYVRNIRHYEITKQDIKVAMCADKVLMDMFHQDV<br/>EDINILSLTDEEPSTSGEQTYDYLKAFMAEIRQYIRELNLI IKVFREPFSVNSKLF SAN</p>   |

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|    | <p>DVENIFSRIVDIHELKSVKLLGHIEDTVEMTDEGSPHPLVGVSCFEDLAEELAFDPYESYAR<br/> DILRPGFHDRFLSQLSKPGAALYLSIQSIEGEGFKEAVQYVLPRLLLAPVYHCLHYFELLKQL<br/> EEKSEDEQEDKECLKQAITALLNVQSGMEKICSKSLAKRRLSESACRFYSQQMKGKQLAIK<br/> KMNEIQKNIDGWEGKDIQCCNEFIMEGTLTRVGAHERHIFLFDGLMICCKSNHGQFRL<br/> PGASNAEYRLKEKFFMRKVQINDKDDTNEYKHAFIILKDENSVIFSAKSAEEKNNWMAA<br/> LISLQYRSTLERMLDVTMLQEEKEEQMRLPSADVRFAPEDSEENIIFEENMQPKAGIPI<br/> IKAGTVIKLIERLTYHMYADPNFVRTFLTTRYRSFCKPQELLSLIERFEIPEPEPTADR<br/> IAIENGDQPLSAELKRFRKEYIQPVQLRVLNVCRHVVEHHFYDFERDAYLLQRMEEFIGT<br/> VRGKAMKKWVESITKIIQRKKIARDNGPGHNITFQSSPPTVEWHISRPGHIETFDLLTLH<br/> PIEIRARQLTLES DYRAVQPSSELVGSVWTKEDKEINSPNLLKMIRHTTNLTLWFEKCI<br/> ETENLEERVAVVSRIEILQVFQELNNFNGVLEVV SAMNSSPVYRLDHTFEQIPSRQKKI<br/> LEEAEHLESDHYKYLAKLRSINPCVFFGIYLTNLIKTEEGNPEVLKRHGKELINFSK<br/> RRKVAETITGEIQYQYQNPYCLRVESDIKRFFENLNPMSMEKEFTDYLFNKSLEIEPRN<br/> PKPLPRFPKKYSYPLKSPGVRPSNRPPTMRHPTPLQEQPRKISYSRIPESETESTASAP<br/> NSPRTLTPPPASGASSTTDVCSVFDSDHSSPFHSSNDTVFIQVTLPHGPRSASVSSISL<br/> TKGTDEVVPPPPVPPRRRPESAPAESSPSKIMSKHLDSPPAIPPRQPTSKAYS PRYSISD<br/> RTSISDPPEPSPLLPPREPVRTPDVFSSSPLHLQPPPLGKKS DHGNAFFPNSPSPFTPPP<br/> PQTPSPHGTRRHLPSPPLTQEVLDHSIAGPPVPPRQSTSQHIPKLPKPKTYKREHTHPSMH<br/> RDGPPLLENAHSS</p>  |
| 9  | <p>&gt;sp P01112 RASH_HUMAN Transforming protein p21/H-Ras-1 (c-H-<br/> ras) - Homo sapiens (Human).<br/> MTEYKLVVVGAGGVGKSALTIQLIQNHVDEYDPTIEDSYRKQVVIDGETCLLDILDITAG<br/> QEEYSAMRDQYMRGTGEGFLCVFAINNTKSFEDIHQYREQIKRVKSDDVPMVLVGNKCDL<br/> AARTVESRQAQDLARSYGIPYIETS AKTRQGVDAFYTLVREIRQHKLRLKLNPPDESGPG<br/> CMSCKCVLS</p>  |
| 10 | <p>&gt;sp P20936 RSG1_HUMAN Ras GTPase-activating protein 1 (GTPase-<br/> activating protein) (GAP) (Ras p21 protein activator)<br/> (p120GAP) (RasGAP) - Homo sapiens (Human).<br/> MMAAEAGSEEGGPVTAGAGGGGAAAGSSAYPAVCRVKI PAALPVAAA PYPGLVETGVAGT<br/> LGGGAALGSEFLGAGSVAGALGGAGLTGGGTAAGVAGAAAGVAGAAVAGPSGDMALTKLP<br/> TSLLAETLGGGGFPPLPPPPYLPPLGAGLGTVDEGDSLDGPEYEEEEVAIPLTAPPTNQ<br/> WYHGKLDRTIAEERLRQAGKSGSYLIRESDRRPGSFVLSFLSQMNVVNHFR I IAMCGDYY<br/> IGGRRFSSLDLIGYYSHVSCLLKGEKLLYPVAPPEPVEDRRRVRALPYTKVPDTEIS<br/> FLKGMDFIVHNELEDGWMWVTNLRDEQGLIVEDLVEEVGREEDPHEGKIWFHGKISKQE<br/> AYNLLMTVGQVCSFLVRPSDNTPGDYSLYFRTNENIQRFKICPTPNNQFMMGGRYNSIG<br/> DIIDHYRKEQIVEGYLKEPVPMQDQEQLVNDTVDGKEIYNTIRRKTKDAFYKNI VVKGY<br/> LLKKGKGRWKNLYFILEGSDAQLTYFESEKRATKPKGLIDLSVCSVYVVHDSLFGRPNC<br/> FQIVVQHFSEEHYIFYFAGETPEQAEDWMKGLQAF CNLRKSSPGTSNKRLRQVSSLVLHI<br/> EEAHKLPVKHFTNPYCN IYLSNVQVAKTHAREGQNPVWSEEFVDDLPPDINRFEITLSN<br/> KTKKSDPDILFMRCQLSRLQKGHATDEWFLSSHIPKGIPEGSLRVRARYSMEKIMPE<br/> EEYSEFKELILQKELHVYALSHVCGQDR TLLASILLRIFLHEKLESLLLCTLNDR EISM<br/> EDEATTLFRATTLASTLMEQYMKATATQFVHHALKDSILKIMESKQSCELSPSKLEKNE<br/> VNTNLTHLLNILSELVEKIFMASEILPPTLRYIYGCLQKSVQHKWPTNTTMRTRVVS GFV<br/> FLRLICPAILNPRMFNIISDSPSPIAARTLILVAKSVQNLANLVEFGAKEPYMEGVNPF I<br/> KSNKHRMIMFLDELGNVPELPTTTEHSRTDLSRDLAALHEICVAHSDELRTLSNERGAQQ<br/> HVLKLLAITELLQQKQNYTKTNDVR</p> |
| 11 | <p>&gt;sp Q9UHA4 MKI1_HUMAN Mitogen-activated protein kinase kinase<br/> 1 interacting protein 1 (MEK binding partner 1) (Mpl)<br/> (PRO2783) - Homo sapiens (Human).<br/> MADDLKRFLYKKLPSVEGLHAIIVS DRDGVPIKVANDNAPEHALRPGFLSTFALATDQG<br/> SKLGLSKNKSIICYNTYQVVQFNRLPLVVSFIASSANTGLIVSLEKELAPLFEELRQV<br/> VEVS</p>   |
| 12 | <p>&gt;sp Q02750 MPK1_HUMAN Dual specificity mitogen-activated<br/> protein kinase kinase 1 (EC 2.7.1.-) (MAP kinase kinase 1)<br/> (MAPKK 1) (ERK activator kinase 1) (MAPK/ERK kinase 1) (MEK1)<br/> - Homo sapiens (Human).<br/> PKKKPTPIQLNPAPDGS AVNGTSSAETNLEALQKKLELELDEQQRKRLEAFLTQKQKVG<br/> ELKDDDFEKISELGAGNGGVVFKVSHKPSGLVMARKLIHLEIKPAIRNQIIRELQVLHEC<br/> NSPYIVGFYGFYSDGEISICMEHMDGGSLDQVLKAGRIPEQILGKVSIAVIKGLTYLR<br/> EKHKIMHRDVKPSN I LVNSRGEIKLCDFGVSGQLIDSMANSFVGTRSYMSPERLQGTHYS</p>  |

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|    | VQSDIWSMGLSLVEMAVGRYPIPPDDAKELELMFGCQVEGDAAETPPRPRTPRRPLSSYG<br>MDSRPMMAIFELLDYIVNEPPPKLPSGVFSLEFQDFVNKCLIKNPAERADLKQLMVHAFI<br>KRSDAEEVDFAGWLCSTIGLNQPSPTHAAGV  |
| 13 | >sp P27361 MK03_HUMAN Mitogen-activated protein kinase 3 (EC<br>2.7.1.37) (Extracellular signal-regulated kinase 1) (ERK-1)<br>(Insulin-stimulated MAP2 kinase) (MAP kinase 1) (MAPK 1) (p44-<br>ERK1) (ERT2) (p44-MAPK) (Microtubule- associated protein-2<br>kinase) - Homo sapiens (Human).<br>MAAAAAQGGGGEPRTTEGVGPGVPEVEMVKGQPFVGVPRYTQLQYIGEGAYGMVSSAY<br>DHVRKTRVAIKKISPFHQTYCQRTLREIQILLRFRHENVIGIRDILRASTLEAMRDVYI<br>VQDLMETDLYKLLKSQQLSNDHICYFLYQILRGLKYIHSANVLHRDLKPSNLLINTCDL<br>KICDFGLARIADPEHDHTGFLTEYVATRWYRAPEIMLNSKGYTKSIDIWSVGCILAEMLS<br>NRPIFPKHYLDQLNHILGILGSPSQEDLNCCIINMKARNYLQSLPSKTKVAWAKLFPKSD<br>SKALDLLDRMLTFNPNKRITVEEALAHPLYEQYYDPTDEPVAEEPTTFAMELDDLPERL<br>KELIFQETARFQPGVLEAP   |
| 14 | >sp P19419 ELK1_HUMAN ETS-domain protein ELK-1 - Homo sapiens<br>(Human).<br>MDPSVTLWQFLLQLLREQNGHIIISWTSRDGGEFKLVDAEEVARLWGLRKNKTNMNYDKL<br>SRALRYYYDKNIIRKVSQKQFVYKFSYPEVAGCSTEDCPPQPEVSVTSTMPNVAPAAIH<br>AAPGDTVSGKPGTPKGAGMAGPGLARSSRNEYMRSGLYSTFTIQSLQPQPPHPRFAVV<br>LPSAAPAGAAAPPSGSRSTSPSPLEACLEAAEEAGLPLQVILTPPEAPNLKSEELNVEPGL<br>GRALPPEVKVEGPKKEELEVAGERGFVETTKAEPEVPPQEGVPARLPAVVMMDTAGQAGH<br>AASSPEISQPQKGRKPRDLELPLSPLLLGGPGPERTPGSGSGSLQAPGPALTPSLPTH<br>TLTPVLLTPSSLPPSIHFWSTLSPIAPRSPAKLSFQFPSSGSAQVHIPISISVDGLSTPVV<br>LSPGPQKP   |
| 15 | >sp Q06124 PTNB_HUMAN Protein-tyrosine phosphatase, non-<br>receptor type 11 (EC 3.1.3.48) (Protein-tyrosine phosphatase<br>2C) (PTP-2C) (PTP-1D) (SH-PTP3) (SH- PTP2) (SHP-2) - Homo<br>sapiens (Human).<br>MTSRRWFHPNITGVEAENLLLTRGVDSFLARPSKSNPGDFTLSVRRNGAVTHIKIQNTG<br>DYDLYGGEKFATLAEVLVQYMEHHGQLKEKNGDVIELKYPLNCADPTSERWFHGHLSGK<br>EAEKLLTEKKGHSFLVRESQSHPGDFVLSVRTGDDKGESNDGKSKVTHVMIRCQELKYD<br>VGGGERFDSLTDLVEHYKKNPMVETLGTVLQLKQPLNTRINAAEIESRVRELSKLAETT<br>DKVKQGFWEFETLQQQECKLLYSRKEGQRQENKKNRYKNILPFDHTRVVLHDGDPNEP<br>VSDYINANIIMPEFETKCNNSKPKKSYIATQGCQLQNTVNDFWRMVFQENSRIIVMTTKEV<br>ERKSKCVKYWPDEYALKEYGVMVRNVKESAADHYTLRELKLSKVGQGNERTVWQYHF<br>RTWPDHGVPSDPGGVLDLFLEEVHKKQESIMDAGPVVHCSAGIGRTGTFIVIDILIDIIR<br>EKGVDCDIDVPKTIQMVRSQRSGMVQTEAQYRFIYMAVQHYIETLQRRIEEEQSKRKGH<br>EYTNIKYSLADQTSQDQSPLPCTPTPPCAEMREDSARVYENVGLMQQKQKSR |
| 16 | >sp P01100 FOS_HUMAN Proto-oncogene protein c-fos (Cellular<br>oncogene fos) (G0/G1 switch regulatory protein 7) - Homo<br>sapiens (Human).<br>MMFSGFNADYEASSRCSASPAGDSLSYHSPADSFSSMGSPVNAQDFCTDLAVSSANF<br>IPTVTAISTSPDLQWLVPALVSSVAPSQTRAPHFPGVPAPSAGAYS RAGVVKMTTGGRA<br>QSIGRRGKVEQLSPEEEKRRIRRRERKNMAAAKCRNRRELTDTLQAETDQLEDEKSALQ<br>TEIANLLKEKEKLEFILAAHRPACKIPDDLGFPEEMSVASLDLTGGLPEVATPESEEAFT<br>LPLLNDPEPKPSVEPVKSISSMELKTEPFDDFLFPASSRPSGSETARVDPMDLGSFYA<br>ADWEPLHSGSLGMGMATELEPLCTPVVTCTPSC TAYTSSFFVFTYPEADSFPSCAAHRK<br>GSSNEPSSDSLSSPTLLAL   |
| 17 | >sp P05412 AP1_HUMAN Transcription factor AP-1 (Activator<br>protein 1) (AP1) (Proto-oncogene c-jun) (V-jun avian sarcoma<br>virus 17 oncogene homolog) (p39) - Homo sapiens (Human).<br>MTAKMETTFYDDALNASFLPSESGPYGYSNPKILKQSMTLNLADPVGSLKPHLRKNSDL<br>LTSPDVGLLKLASPELERLIQSSNGHITTTPTPTQFLCPKNVTDEQEGFAEGFVRALAE<br>LHSQNTLPSVTSAAQPVNGAGMVAVASVAGGSGSGGFSASLHSEPPVYANLSNFPNGA<br>LSSGGGAPSYGAAGLAFPAQPQQQQPPHHLPPQMPVQHPRLQALKEEPQTVPEMPGETP<br>PLSPIDMESQERIKAEKRMRNRNIAASKCRKRKLERIARLEEKVKTLKAQNSELASTANM<br>LREQVAQLKQKVMNHVNSGCQLMLTQQQLQTF   |

|    |   |
|----|---|
| 18 | <p>&gt;sp P17275 JUNB_HUMAN Transcription factor jun-B - Homo sapiens (Human).</p> <p>MCTKMEQPFYHDDSYPATGYGRAPGGSLHDKLLKPSLAVNLADPYRSLKAPGARGPGP<br/> EGGGGGSYFSGQSDTGASLKLASSELERLIVPNSNGVITTTPTPPGQYFYPRGGGSGGG<br/> AGGAGGGVTTEEQEGFADGFVKALDDLHKMNHVTPPNVSLGATGGPPAGPGGVYAGPEPPP<br/> VYTNLSSYSPASASSGGAGAAVGTGSSYPTTTTISYLPHAPPFAGGHPAQLGLGRGASTFK<br/> EEPQTVPEARSRDATPPVSPINMEDQERIKVERKRLRNRLAATKCRKRKLERIARLEDKV<br/> KTLKAENAGLSSTAGLLREQVAQLKQKVMTHVSNCGQLLLGVKGHAF</p>  |
| 19 | <p>&gt;sp P19138 KC21_HUMAN Casein kinase II, alpha chain (CK II) (EC 2.7.1.37) - Homo sapiens (Human), and Bos taurus (Bovine).</p> <p>MSGPVPSRARVYTDVNTHRPREYWDYESHVVEWGNQDDYQLVRKLGKGYSEVFEAINIT<br/> NNEKVVVKILKPVKKKIKREIKILENLRGGPNITLADIVKDPVSRTPALVFEHVNTD<br/> FKQLYQTLTDYDIRFYMYEILKALDYCHSMGIMHRDVKPHNVMIDHEHRKRLRIDWGLAE<br/> FYHPGQEYNVRVASRYFKGPELLVDYQMYDYSLDMWSLGCMLASMIFRKEPFFHGHNDYD<br/> QLVRIAKVLGTEDLDYDIDKYNIELDPRFNDILGRHSRKRWERFVHSENQHLVSPEALDF<br/> LDKLLRYDHQSRLTAREAMEHPYFYTVVKDQARMGSSSMPGGSTPVSSANMMSGISSVPT<br/> PSPLGPLAGSPVIAAANPLGMPVPAAGAQQ</p>  |
| 20 | <p>&gt;sp P45983 MK08_HUMAN Mitogen-activated protein kinase 8 (EC 2.7.1.37) (Stress-activated protein kinase JNK1) (c-Jun N-terminal kinase 1) (JNK-46) - Homo sapiens (Human).</p> <p>MSRSKRDNNFYSVEIGDSTFTVLKRYQNLKPIGSGAQGIVCAAYDAILERNVAIKKLSRP<br/> FQNQTHAKRAYRELVLMKCVNHKNIIGLLNVFTTPQKSLEEFQDVYIVMELMDANLCQVIQ<br/> MELDHERMSYLLYQMLCGIKHLHSAGIIHRDLKPSNIVVKSDCTLKILDFGLARTAGTSF<br/> MMTPYVVTRYRAPEVILGMGYKENVDLWSVGCIMGEMVCHKILFPGRDYIDQWNKVIEQ<br/> LGTPCPEFMKKLQPTVRTYVENRPKYAGYSFEKLPDVLFPADSEHNKLKASQARDLLSK<br/> MLVIDASKRISVDEALQHPYINVWYDPSEAEAPPKIPDKQLDEREHTIEEWKELIYKEV<br/> MDLEERTKNGVIRGQPSPLGAAVINGSQHPSSSSSVNDVSSMSTDPTLASDTSLEAAA<br/> GPLGCCR</p> |

## Table S2

Results of search from nr database for pentameric sequences containing E:D:G:C::2:1:1:1. A key denoting highlights is below. Disintegrin and ADAM proteins are well represented (30 examples), as well as a number of receptors of various types (34 examples). Entries 347 and 348 are the insulin receptor precursor.

KEY:

|                   |                    |
|-------------------|--------------------|
| ADAM; disintegrin | (yellow highlight) |
| Zinc              | (blue highlight)   |
| receptor          | (green highlight)  |
| Insulin           | (yellow highlight) |
| Calcium           | (blue, bold)       |
| Sodium; Na        | (green, bold)      |

1. GEECD: 56, >IPI:IPI00288894.1|SWISS-PROT:P78536-1|REFSEQ NP:NP\_003174|ENSEMBL:ENSP00000309968 Tax\_Id=9606 Splice isoform A of P78536 ADAM 17 precursor
2. GEECD: 64, >IPI:IPI00029606.1|SWISS-PROT:P78536-2|REFSEQ NP:NP\_068604|ENSEMBL:ENSP00000281420 Tax\_Id=9606 Splice isoform B of P78536 ADAM 17 precursor
3. DECEG: 92, >IPI:IPI00157513.1|REFSEQ NP:NP\_640329|TREMBL:Q96RW4|ENSEMBL:ENSP00000276935 Tax\_Id=9606 ADAM-TS related protein 1 isoform 1
4. CEDEG: 276, >IPI:IPI00140138.1|REFSEQ NP:NP\_064540|TREMBL:Q96N19|ENSEMBL:ENSP00000310351 Tax\_Id=9606 Hypothetical protein FLJ31532
5. EDEGC: 276, >IPI:IPI00140138.1|REFSEQ NP:NP\_064540|TREMBL:Q96N19|ENSEMBL:ENSP00000310351 Tax\_Id=9606 Hypothetical protein FLJ31532
6. EDEGC: 790, >IPI:IPI00215659.1|TREMBL:Q96MX2 Tax\_Id=9606 Hypothetical protein FLJ31755
7. CEEGD: 944, >IPI:IPI00173394.2|REFSEQ\_XP:XP\_210139 Tax\_Id=9606 similar to hypothetical protein MGC23885
8. ECEGD: 2026, >IPI:IPI00232476.1|TREMBL:O75341|ENSEMBL:ENSP00000261737 Tax\_Id=9606 BRCA1-associated protein 2
9. DGCEE: 2066, >IPI:IPI00097548.1|SWISS-PROT:Q9BZW2|REFSEQ NP:NP\_071889|ENSEMBL:ENSP00000194130 Tax\_Id=9606 Solute carrier family 13, member 1
10. GCEED: 2248, >IPI:IPI00064885.2|REFSEQ NP:NP\_694563|TREMBL:Q96NJ6|ENSEMBL:ENSP00000320347 Tax\_Id=9606 Hypothetical protein FLJ30726
11. GEDCE: 2776, >IPI:IPI00332150.1|ENSEMBL:ENSP00000332692 Tax\_Id=9606

12. CEGDE: 3266,  
>IPI:IPI00173549.1|TREMBL:Q9UK89;Q9UMS6|REFSEQ\_XP:XP\_050219|ENSEMBL:ENSP00000306015 Tax\_Id=9606 similar to Myopodin protein
13. EGCDE: 3368, >IPI:IPI00289489.1|SWISS-  
PROT:O15230|REFSEQ\_NP:NP\_005551|TREMBL:O75079;Q8TDF8|ENSEMBL:ENSP00000252999  
Tax\_Id=9606 Laminin alpha-5 chain precursor
14. CEGED: 3828, >IPI:IPI00332170.1|ENSEMBL:ENSP00000332727 Tax\_Id=9606
15. DCEGE: 3828, >IPI:IPI00332170.1|ENSEMBL:ENSP00000332727 Tax\_Id=9606
16. DCEEG: 3936, >IPI:IPI00018298.3|SWISS-  
PROT:P09913|REFSEQ\_NP:NP\_001538|TREMBL:Q8IZ03|ENSEMBL:ENSP00000238977  
Tax\_Id=9606 interferon-induced protein with tetratricopeptide repeats 2
17. GDECE: 3974, >IPI:IPI00329773.2|SWISS-  
PROT:Q9NR19|REFSEQ\_NP:NP\_061147|TREMBL:Q9BYP4;Q96FY7;Q9BYP2;Q9H9U4;Q8N238|ENSEMBL:ENSP00000253382 Tax\_Id=9606 Acetyl-coenzyme A synthetase, cytoplasmic
18. EGCED: 4522,  
>IPI:IPI00215830.1|REFSEQ\_NP:NP\_001557|TREMBL:O15326|ENSEMBL:ENSP00000323547  
Tax\_Id=9606 Inositol polyphosphate 4-phosphatase type I-beta
19. EGCED: 4720,  
>IPI:IPI00044388.1|REFSEQ\_NP:NP\_004018|TREMBL:Q96PE3;Q8TC02;Q13187|ENSEMBL:ENSP00000074304 Tax\_Id=9606 Inositol polyphosphate 4-phosphatase type I alpha 3
20. EDEGC: 4906, >IPI:IPI00015931.1|SWISS-  
PROT:P17658|REFSEQ\_NP:NP\_002226|ENSEMBL:ENSP00000280684 Tax\_Id=9606 Potassium voltage-gated channel subfamily A member 6
21. DECGE: 4952, >IPI:IPI00215890.1|SWISS-  
PROT:P17026|REFSEQ\_NP:NP\_008894|ENSEMBL:ENSP00000298299 Tax\_Id=9606 zinc  
finger protein 22 (KOX 15)
22. CGEED: 5108, >IPI:IPI00044600.2|SWISS-  
PROT:Q96PQ0|REFSEQ\_NP:NP\_065828|ENSEMBL:ENSP00000329124 Tax\_Id=9606 VPS10  
domain-containing receptor SorCS2 precursor
23. GEEDC: 5112,  
>IPI:IPI00289801.1|TREMBL:Q96Q02;Q9H6R2;Q96H77|ENSEMBL:ENSP00000320183;ENSP00000329529;ENSP00000329417 Tax\_Id=9606 Hypothetical protein KIAA1885
24. EGEDC: 5124,  
>IPI:IPI00140833.1|TREMBL:Q96Q04|REFSEQ\_XP:XP\_055866|ENSEMBL:ENSP00000270238  
Tax\_Id=9606 Hypothetical protein KIAA1883
25. ECEDG: 5240, >IPI:IPI00332253.1|ENSEMBL:ENSP00000332862;ENSP00000333000  
Tax\_Id=9606
26. CGEDE: 5334, >IPI:IPI00332264.1|TREMBL:Q8TBX6|ENSEMBL:ENSP00000253490  
Tax\_Id=9606 Hypothetical protein
27. CEDEG: 5346, >IPI:IPI00332270.1|ENSEMBL:ENSP00000332885 Tax\_Id=9606

28. GEECD: 5366, >IPI:IPI00289829.1|SWISS-PROT:Q9UKF5-1|REFSEQ\_NP:NP\_055084|ENSEMBL:ENSP00000302171;ENSP00000330560 Tax\_Id=9606 Splice isoform Alpha of Q9UKF5 ADAM 29 precursor
29. GEECD: 5368, >IPI:IPI00029112.1|SWISS-PROT:Q9UKF5-2|REFSEQ\_NP:NP\_068551 Tax\_Id=9606 Splice isoform Beta of Q9UKF5 ADAM 29 precursor
30. GEECD: 5370, >IPI:IPI00029113.1|SWISS-PROT:Q9UKF5-3|REFSEQ\_NP:NP\_068552 Tax\_Id=9606 Splice isoform Gamma of Q9UKF5 ADAM 29 precursor
31. CEDGE: 5984, >IPI:IPI00233595.1|REFSEQ\_XP:XP\_293565 Tax\_Id=9606 similar to chromosome 11 open reading frame2
32. GEECD: 6554, >IPI:IPI00181360.2|TREMBL:Q96QP9 Tax\_Id=9606 SDC-SIGN1B type II isoform
33. GEECD: 6576, >IPI:IPI00290006.1|TREMBL:Q96QQ1 Tax\_Id=9606 MDC-SIGN1B type I isoform
34. GEECD: 6586, >IPI:IPI00045033.1|TREMBL:Q96QQ5|ENSEMBL:ENSP00000315407 Tax\_Id=9606 SDC-SIGN1A type I isoform
35. GEECD: 6590, >IPI:IPI00045034.1|TREMBL:Q96QQ6 Tax\_Id=9606 MDC-SIGN1A type IV isoform
36. GEECD: 6594, >IPI:IPI00290007.3|TREMBL:Q96QQ3;Q96QQ7|ENSEMBL:ENSP00000204801 Tax\_Id=9606 MDC-SIGN1A type III isoform
37. CEEDG: 7190, >IPI:IPI00029778.1|SWISS-PROT:Q12888|REFSEQ\_NP:NP\_005648|ENSEMBL:ENSP00000263801 Tax\_Id=9606 Tumor suppressor p53-binding protein 1
38. DEEGC: 7704, >IPI:IPI00234213.1|TREMBL:O75851|ENSEMBL:ENSP00000262089 Tax\_Id=9606 WUGSC:H\_DJ0751H13.1 protein
39. EDCGE: 7704, >IPI:IPI00234213.1|TREMBL:O75851|ENSEMBL:ENSP00000262089 Tax\_Id=9606 WUGSC:H\_DJ0751H13.1 protein
40. CGEED: 7754, >IPI:IPI00183001.2|REFSEQ\_XP:XP\_096330 Tax\_Id=9606 hypothetical protein XP\_096330
41. CDGEE: 7842, >IPI:IPI00005774.1|REFSEQ\_NP:NP\_004622|TREMBL:Q9BR78;Q14114|ENSEMBL:ENSP00000321958 Tax\_Id=9606 Apolipoprotein E receptor 2 precursor
42. EDEGC: 8036, >IPI:IPI00170531.1|REFSEQ\_NP:NP\_114092|TREMBL:Q96RP8;Q9BYS4|ENSEMBL:ENSP00000221444 Tax\_Id=9606 Voltage-gated potassium channel KCNA7
43. CGEED: 8192, >IPI:IPI00016859.2|SWISS-PROT:Q92994-1|REFSEQ\_NP:NP\_001510|ENSEMBL:ENSP00000329029 Tax\_Id=9606 Splice isoform 1 of Q92994 Transcription factor IIIB 90 kDa subunit
44. CGEED: 8198, >IPI:IPI00157643.1|SWISS-PROT:Q92994-3|REFSEQ\_NP:NP\_663718 Tax\_Id=9606 Splice isoform 3 of Q92994 Transcription factor IIIB 90 kDa subunit

45. DECGE: 8800, >IPI:IPI00028450.1|SWISS-PROT:P32418-1|REFSEQ\_NP:NP\_066920|ENSEMBL:ENSP00000332931 Tax\_Id=9606 Splice isoform 1 of P32418 **Sodium/calcium** exchanger 1 precursor
46. DECGE: 8802, >IPI:IPI00216107.1|SWISS-PROT:P32418-2|TREMBL:Q9UD55;Q14913 Tax\_Id=9606 Splice isoform 3 of P32418 **Sodium/calcium** exchanger 1 precursor
47. DECGE: 8808, >IPI:IPI00216108.1|SWISS-PROT:P32418-3 Tax\_Id=9606 Splice isoform 7 of P32418 **Sodium/calcium** exchanger 1 precursor
48. DECGE: 8812, >IPI:IPI00216109.1|SWISS-PROT:P32418-4 Tax\_Id=9606 Splice isoform 10 of P32418 **Sodium/calcium** exchanger 1 precursor
49. CEEGD: 9158, >IPI:IPI00290465.1|TREMBL:Q8TAN8 Tax\_Id=9606 Dynactin 4
50. EGECD: 9324, >IPI:IPI00141177.1|REFSEQ\_XP:XP\_115639 Tax\_Id=9606 similar to leukocyte immunoglobulin-like **receptor**, subfamily B (with TM and ITIM domains), member 6
51. CEDGE: 9356, >IPI:IPI00021537.2|SWISS-PROT:Q9NZT2-1|REFSEQ\_NP:NP\_031372|ENSEMBL:ENSP00000290291 Tax\_Id=9606 Splice isoform 1 of Q9NZT2 Opioid growth factor **receptor**
52. CEDGE: 9358, >IPI:IPI00216130.1|SWISS-PROT:Q9NZT2-2 Tax\_Id=9606 Splice isoform 2 of Q9NZT2 Opioid growth factor **receptor**
53. EDGE: 9416, >IPI:IPI00170891.1|REFSEQ\_NP:NP\_683702;NP\_683703|TREMBL:Q8TAS8 Tax\_Id=9606 Oxysterol binding protein-like 9
54. CGEED: 9420, >IPI:IPI00152108.1|REFSEQ\_NP:NP\_036300|TREMBL:Q8TB29|ENSEMBL:ENSP00000235299 Tax\_Id=9606 F-box only protein 2
55. EDGE: 9498, >IPI:IPI00290550.1|REFSEQ\_NP:NP\_683705|TREMBL:Q96SK4 Tax\_Id=9606 Hypothetical protein FLJ14801
56. GCEED: 9588, >IPI:IPI00178375.1|TREMBL:Q8TB50|ENSEMBL:ENSP00000313070 Tax\_Id=9606 Similar to KIAA0433 protein
57. EEDGC: 9656, >IPI:IPI00014211.1|SWISS-PROT:Q07011|REFSEQ\_NP:NP\_001552|ENSEMBL:ENSP00000054670 Tax\_Id=9606 Tumor necrosis factor **receptor** superfamily member 9 precursor
58. DCGEE: 10064, >IPI:IPI00216170.1|SWISS-PROT:P10159|REFSEQ\_NP:NP\_001961|ENSEMBL:ENSP00000254843 Tax\_Id=9606 eukaryotic translation initiation factor 5A
59. ECGDE: 10516, >IPI:IPI00235181.1|REFSEQ\_XP:XP\_305828 Tax\_Id=9606 hypothetical protein XP\_305828
60. CEGED: 11724, >IPI:IPI00011836.1|SWISS-PROT:Q13107-1|REFSEQ\_NP:NP\_003354|ENSEMBL:ENSP00000265560 Tax\_Id=9606 Splice isoform UNPEL of Q13107 Ubiquitin carboxyl-terminal hydrolase 4
61. CEGED: 11726, >IPI:IPI00216257.1|SWISS-PROT:Q13107-2 Tax\_Id=9606 Splice isoform UNPES of Q13107 Ubiquitin carboxyl-terminal hydrolase 4

62. CEGED: 12024,  
>IPI:IPI00102864.1|REFSEQ\_NP:NP\_000180|TREMBL:Q8WU87|ENSEMBL:ENSP00000290573  
Tax\_Id=9606 Hexokinase 2

63. DEGEC: 12572, >IPI:IPI00235759.1|REFSEQ\_XP:XP\_305957 Tax\_Id=9606  
similar to olfactory **receptor**

64. GDECE: 12766, >IPI:IPI00027107.3|SWISS-  
PROT:P49411|REFSEQ\_NP:NP\_003312|ENSEMBL:ENSP00000322439 Tax\_Id=9606 Tu  
translation elongation factor, mitochondrial

65. ECDGE: 12864,  
>IPI:IPI00046309.1|REFSEQ\_XP:XP\_066534|ENSEMBL:ENSP00000289280 Tax\_Id=9606  
similar to Diacylglycerol kinase, delta (Diglyceride kinase) (DGK-delta) (DAG  
kinase delta) (130 kDa diacylglycerol kinase)

66. ECEGD: 13184,  
>IPI:IPI00152462.1|REFSEQ\_NP:NP\_060009|TREMBL:O15437;Q9UEM5;O43326;Q9UG35;Q8T  
D57;Q9UEM3;O00437|ENSEMBL:ENSP00000261383 Tax\_Id=9606 Axonemal heavy chain  
dynein type 3

67. EEGCD: 13620, >IPI:IPI00031015.1|SWISS-  
PROT:Q14493|REFSEQ\_NP:NP\_006518|ENSEMBL:ENSP00000316490 Tax\_Id=9606 Histone  
RNA hairpin-binding protein

68. CEDGE: 13680, >IPI:IPI00178788.2|ENSEMBL:ENSP00000318933 Tax\_Id=9606

69. DCGEE: 13680, >IPI:IPI00178788.2|ENSEMBL:ENSP00000318933 Tax\_Id=9606

70. EDCGE: 13680, >IPI:IPI00178788.2|ENSEMBL:ENSP00000318933 Tax\_Id=9606

71. EDGEC: 13680, >IPI:IPI00178788.2|ENSEMBL:ENSP00000318933 Tax\_Id=9606

72. ECEDG: 13890, >IPI:IPI00178829.1|ENSEMBL:ENSP00000276891 Tax\_Id=9606

73. GEECD: 14396, >IPI:IPI00019173.2|SWISS-PROT:Q99965-  
1|REFSEQ\_NP:NP\_001455|ENSEMBL:ENSP00000265708 Tax\_Id=9606 Splice isoform 1 of  
Q99965 **ADAM** 2 precursor

74. GEECD: 14398, >IPI:IPI00216374.1|SWISS-PROT:Q99965-2 Tax\_Id=9606 Splice  
isoform 2 of Q99965 **ADAM** 2 precursor

75. DEEGC: 15648, >IPI:IPI00178940.2|ENSEMBL:ENSP00000320248 Tax\_Id=9606

76. EDEGC: 16138, >IPI:IPI00157767.1|TREMBL:Q8TEJ1 Tax\_Id=9606 FLJ00206  
protein

77. DCGEE: 16788,  
>IPI:IPI00152847.1|REFSEQ\_NP:NP\_783165|TREMBL:Q8TEU8|ENSEMBL:ENSP00000311184  
Tax\_Id=9606 Multivalent protease inhibitor protein

78. EDCGE: 16788,  
>IPI:IPI00152847.1|REFSEQ\_NP:NP\_783165|TREMBL:Q8TEU8|ENSEMBL:ENSP00000311184  
Tax\_Id=9606 Multivalent protease inhibitor protein

79. CEGED: 16872,  
>IPI:IPI00304849.3|REFSEQ\_NP:NP\_079406|TREMBL:Q8WU37;Q96EH2|ENSEMBL:ENSP00000298648 Tax\_Id=9606 hypothetical protein FLJ22761

80. DCEGE: 16872,  
>IPI:IPI00304849.3|REFSEQ\_NP:NP\_079406|TREMBL:Q8WU37;Q96EH2|ENSEMBL:ENSP00000298648 Tax\_Id=9606 hypothetical protein FLJ22761

81. EDCEG: 17896, >IPI:IPI00292059.1|SWISS-  
PROT:P49790|REFSEQ\_NP:NP\_005115|ENSEMBL:ENSP00000262077 Tax\_Id=9606 Nuclear pore complex protein Nup153

82. CEGED: 17902, >IPI:IPI00221325.2|SWISS-  
PROT:P49792|REFSEQ\_NP:NP\_006258|TREMBL:Q13073;Q13074|ENSEMBL:ENSP00000283195;ENSP00000315836 Tax\_Id=9606 Ran-binding protein 2

83. DCEGE: 17902, >IPI:IPI00221325.2|SWISS-  
PROT:P49792|REFSEQ\_NP:NP\_006258|TREMBL:Q13073;Q13074|ENSEMBL:ENSP00000283195;ENSP00000315836 Tax\_Id=9606 Ran-binding protein 2

84. GCEED: 18972, >IPI:IPI00237376.1|REFSEQ\_XP:XP\_295599 Tax\_Id=9606  
hypothetical protein XP\_295599

85. CEGED: 19342,  
>IPI:IPI00145406.3|TREMBL:O14715|REFSEQ\_XP:XP\_300391|ENSEMBL:ENSP00000306637 Tax\_Id=9606 similar to RAN-binding protein 2-like 1 isoform 1

86. DCEGE: 19342,  
>IPI:IPI00145406.3|TREMBL:O14715|REFSEQ\_XP:XP\_300391|ENSEMBL:ENSP00000306637 Tax\_Id=9606 similar to RAN-binding protein 2-like 1 isoform 1

87. CEDGE: 19528, >IPI:IPI00332725.1|ENSEMBL:ENSP00000327776 Tax\_Id=9606

88. DCGEE: 19528, >IPI:IPI00332725.1|ENSEMBL:ENSP00000327776 Tax\_Id=9606

89. EDCGE: 19528, >IPI:IPI00332725.1|ENSEMBL:ENSP00000327776 Tax\_Id=9606

90. EDGEC: 19528, >IPI:IPI00332725.1|ENSEMBL:ENSP00000327776 Tax\_Id=9606

91. DEGEC: 20088, >IPI:IPI00297629.2|SWISS-  
PROT:O76001|TREMBL:Q96R15|REFSEQ\_XP:XP\_212594;XP\_305975|ENSEMBL:ENSP00000259884 Tax\_Id=9606 similar to Olfactory **receptor** 2J3 (Olfactory **receptor** 6-6) (OR6-6) (Hs6M1-3)

92. GEECD: 20720, >IPI:IPI00069817.2|SWISS-PROT:Q9UIG0-  
1|REFSEQ\_NP:NP\_115784|ENSEMBL:ENSP00000265756 Tax\_Id=9606 Splice isoform 1 of Q9UIG0 Bromodomain adjacent to **zinc** finger domain protein 1B

93. GEECD: 20722, >IPI:IPI00216695.1|SWISS-PROT:Q9UIG0-2|TREMBL:Q86UJ6  
Tax\_Id=9606 Splice isoform 2 of Q9UIG0 Bromodomain adjacent to **zinc** finger domain protein 1B

94. DGCEE: 20962,  
>IPI:IPI00103925.1|TREMBL:Q8WZA9|REFSEQ\_XP:XP\_065026|ENSEMBL:ENSP00000300809 Tax\_Id=9606 FKSG27

95. DECEG: 21696, >IPI:IPI00328113.2|SWISS-PROT:P35555|REFSEQ\_NP:NP\_000129|TREMBL:Q15972;Q9NP01|ENSEMBL:ENSP00000325527 Tax\_Id=9606 Fibrillin 1 precursor

96. EDEGC: 21832, >IPI:IPI00216878.1|REFSEQ\_NP:NP\_079174|TREMBL:Q9H5Z2;Q8IV53;Q8NDB1|ENSEMBL:ENSP00000264083 Tax\_Id=9606 Hypothetical protein FLJ22757

97. DGCEE: 22118, >IPI:IPI00238075.1|REFSEQ\_XP:XP\_295732 Tax\_Id=9606 hypothetical protein XP\_295732

98. EDGCE: 22232, >IPI:IPI00171453.1|SWISS-PROT:Q9NVP4-1|ENSEMBL:ENSP00000287356 Tax\_Id=9606 Splice isoform 1 of Q9NVP4 Protein c20orf12

99. EDGCE: 22234, >IPI:IPI00216942.1|SWISS-PROT:Q9NVP4-2|REFSEQ\_NP:NP\_060622|ENSEMBL:ENSP00000262547 Tax\_Id=9606 Splice isoform 2 of Q9NVP4 Protein c20orf12

100. DEECG: 22460, >IPI:IPI00216963.1|SWISS-PROT:O15519-9 Tax\_Id=9606 Splice isoform 9 of O15519 CASP8 and FADD-like apoptosis regulator precursor

101. CEGED: 22538, >IPI:IPI00302502.2|TREMBL:Q9H5Y9|ENSEMBL:ENSP00000287067 Tax\_Id=9606 Hypothetical protein FLJ22761

102. DCEGE: 22538, >IPI:IPI00302502.2|TREMBL:Q9H5Y9|ENSEMBL:ENSP00000287067 Tax\_Id=9606 Hypothetical protein FLJ22761

103. EGEDC: 22590, >IPI:IPI00332867.1|ENSEMBL:ENSP00000329165 Tax\_Id=9606

104. ECEDG: 22634, >IPI:IPI00292859.1|SWISS-PROT:P20023-1|REFSEQ\_NP:NP\_001868|ENSEMBL:ENSP00000326149 Tax\_Id=9606 Splice isoform A of P20023 Complement receptor type 2 precursor

105. ECEDG: 22636, >IPI:IPI00216985.1|SWISS-PROT:P20023-2|TREMBL:Q9H2B3 Tax\_Id=9606 Splice isoform B of P20023 Complement receptor type 2 precursor

106. ECEDG: 22638, >IPI:IPI00216986.1|SWISS-PROT:P20023-3 Tax\_Id=9606 Splice isoform C of P20023 Complement receptor type 2 precursor

107. ECEDG: 22640, >IPI:IPI00216987.1|SWISS-PROT:P20023-4 Tax\_Id=9606 Splice isoform D of P20023 Complement receptor type 2 precursor

108. CEGDE: 22700, >IPI:IPI00007956.1|REFSEQ\_NP:NP\_006463|TREMBL:Q9BXG9;Q9H3M7;Q16226|ENSEMBL:ENSP00000235941 Tax\_Id=9606 Brain-expressed HHCPA78 homolog VDUP1

109. GEDCE: 22726, >IPI:IPI00332886.1|ENSEMBL:ENSP00000329193 Tax\_Id=9606

110. CEDGE: 23008, >IPI:IPI00332906.1|ENSEMBL:ENSP00000327936 Tax\_Id=9606

111. DCGEE: 23008, >IPI:IPI00332906.1|ENSEMBL:ENSP00000327936 Tax\_Id=9606

112. EDGEC: 23008, >IPI:IPI00332906.1|ENSEMBL:ENSP00000327936 Tax\_Id=9606

113. GDECE: 23330, >IPI:IPI00238420.1|REFSEQ\_XP:XP\_297070 Tax\_Id=9606 hypothetical protein XP\_297070

**114.** EDCEG: 23334,  
 >IPI:IPI00292956.1|TREMBL:Q9NTD6;Q96AL1;Q9P2L9|REFSEQ\_XP:XP\_051146|ENSEMBL:EN  
 SP00000040738 Tax\_Id=9606 KIAA1327 protein

**115.** EEC DG: 23334,  
 >IPI:IPI00292956.1|TREMBL:Q9NTD6;Q96AL1;Q9P2L9|REFSEQ\_XP:XP\_051146|ENSEMBL:EN  
 SP00000040738 Tax\_Id=9606 KIAA1327 protein

**116.** EDEGC: 23548,  
 >IPI:IPI00157942.2|REFSEQ\_XP:XP\_170664|ENSEMBL:ENSP00000329798 Tax\_Id=9606  
 similar to pecanex-like 3

**117.** EGEDC: 23880, >IPI:IPI00217197.1|TREMBL:Q8IW93|ENSEMBL:ENSP00000270747  
 Tax\_Id=9606 Similar to hypothetical protein FLJ33962

**118.** GDCEE: 24742,  
 >IPI:IPI00019004.1|REFSEQ\_NP:NP\_003253|TREMBL:Q99442|ENSEMBL:ENSP00000009363;  
 ENSP00000310265 Tax\_Id=9606 TRANSLOCATIONAL protein-1

**119.** ECDGE: 25188, >IPI:IPI00020557.1|SWISS-  
 PROT:Q07954|REFSEQ\_NP:NP\_002323|TREMBL:Q86SW0|ENSEMBL:ENSP00000243077  
 Tax\_Id=9606 Low-density lipoprotein **receptor**-related protein 1 precursor

**120.** EDECG: 25296,  
 >IPI:IPI00217435.1|REFSEQ\_NP:NP\_766638|TREMBL:Q8IWY4|ENSEMBL:ENSP00000290460  
 Tax\_Id=9606 Signal peptide-CUB-EGF-like domain containing protein 1

**121.** CEEGD: 25570, >IPI:IPI00003443.2|SWISS-PROT:Q16666-  
 1|ENSEMBL:ENSP00000319280 Tax\_Id=9606 Splice isoform 1 of Q16666 Gamma-  
 interferon-inducible protein Ifi-16

**122.** CEEGD: 25572, >IPI:IPI00217474.1|SWISS-PROT:Q16666-  
 2|REFSEQ\_NP:NP\_005522|TREMBL:Q96AJ5;Q8NEQ7|ENSEMBL:ENSP00000295808  
 Tax\_Id=9606 Splice isoform 2 of Q16666 Gamma-interferon-inducible protein  
 Ifi-16

**123.** CEEGD: 25576, >IPI:IPI00217475.1|SWISS-PROT:Q16666-3 Tax\_Id=9606 Splice  
 isoform 3 of Q16666 Gamma-interferon-inducible protein Ifi-16

**124.** DEECG: 25998, >IPI:IPI00293293.1|SWISS-PROT:Q99523 Tax\_Id=9606 Sortilin  
 precursor

**125.** CEGED: 27810,  
 >IPI:IPI00293568.1|REFSEQ\_NP:NP\_005045|TREMBL:Q99666|ENSEMBL:ENSP00000016946;  
 ENSP00000330842 Tax\_Id=9606 Sperm membrane protein BS-63

**126.** DCEGE: 27810,  
 >IPI:IPI00293568.1|REFSEQ\_NP:NP\_005045|TREMBL:Q99666|ENSEMBL:ENSP00000016946;  
 ENSP00000330842 Tax\_Id=9606 Sperm membrane protein BS-63

**127.** EEGDC: 27922, >IPI:IPI00333139.1|SWISS-  
 PROT:Q99683|REFSEQ\_NP:NP\_005914|ENSEMBL:ENSP00000265606 Tax\_Id=9606 Mitogen-  
 activated protein kinase kinase kinase 5

**128.** EGDCE: 27922, >IPI:IPI00333139.1|SWISS-  
 PROT:Q99683|REFSEQ\_NP:NP\_005914|ENSEMBL:ENSP00000265606 Tax\_Id=9606 Mitogen-  
 activated protein kinase kinase kinase 5

**129.** GEECD: 28000,  
 >IPI:IPI00333140.1|REFSEQ\_NP:NP\_620711|TREMBL:Q8IYT0;Q9UDM2;Q9NTF1;Q8TB42;Q8NFT8|ENSEMBL:ENSP00000309867 Tax\_Id=9606 Similar to delta-notch-like EGF repeat-containing transmembrane

**130.** DEECG: 28068,  
 >IPI:IPI00217882.1|REFSEQ\_NP:NP\_002950|TREMBL:Q8IZ49|ENSEMBL:ENSP00000256637 Tax\_Id=9606 Sortilin 1

**131.** DCGEE: 28478,  
 >IPI:IPI00239974.1|REFSEQ\_XP:XP\_290186|ENSEMBL:ENSP00000329807 Tax\_Id=9606 similar to eukaryotic initiation factor 5A

**132.** ECGED: 28644, >IPI:IPI00031422.3|SWISS-PROT:Q14524|REFSEQ\_NP:NP\_000326|TREMBL:Q8WWN5;Q8IZC9;Q8WTQ6;Q96J69;Q86UR3;Q8WTS0|ENSEMBL:ENSP00000328968 Tax\_Id=9606 Cardiac **sodium** channel alpha subunit Nav1.5

**133.** DCGEE: 29618,  
 >IPI:IPI00218084.2|REFSEQ\_XP:XP\_084467|ENSEMBL:ENSP00000331000 Tax\_Id=9606 similar to eukaryotic initiation factor 5A

**134.** CEDGE: 31564, >IPI:IPI00022608.1|SWISS-PROT:Q92673|REFSEQ\_NP:NP\_003096|ENSEMBL:ENSP00000260197 Tax\_Id=9606 Sortilin-related **receptor** precursor

**135.** ECEGD: 31666,  
 >IPI:IPI00240961.1|REFSEQ\_XP:XP\_302387|ENSEMBL:ENSP00000333778 Tax\_Id=9606 similar to Multifunctional protein ADE2

**136.** GDECE: 33070,  
 >IPI:IPI00294630.1|REFSEQ\_NP:NP\_644803|ENSEMBL:ENSP00000321387 Tax\_Id=9606 acetyl-CoA synthetase 2 isoform b

**137.** DGECE: 33506,  
 >IPI:IPI00163901.1|TREMBL:Q9Y3V7;Q8IUI0;Q8IUI1|ENSEMBL:ENSP00000295761 Tax\_Id=9606 Hypothetical protein

**138.** GECED: 33506,  
 >IPI:IPI00163901.1|TREMBL:Q9Y3V7;Q8IUI0;Q8IUI1|ENSEMBL:ENSP00000295761 Tax\_Id=9606 Hypothetical protein

**139.** ECDEG: 33580,  
 >IPI:IPI00028987.1|REFSEQ\_NP:NP\_068506|TREMBL:O95425;Q9H1R7;O60611|ENSEMBL:ENSP00000263057 Tax\_Id=9606 Archvillin

**140.** CEDGE: 33702, >IPI:IPI00333400.1|ENSEMBL:ENSP00000329881 Tax\_Id=9606

**141.** CDGEE: 34036, >IPI:IPI00241624.1|REFSEQ\_XP:XP\_297753 Tax\_Id=9606 hypothetical protein XP\_297753

**142.** ECEGD: 34356, >IPI:IPI00294839.1|SWISS-PROT:Q9Y4K0|REFSEQ\_NP:NP\_002309|ENSEMBL:ENSP00000256397 Tax\_Id=9606 Lysyl oxidase homolog 2 precursor

**143.** CDEGE: 34614, >IPI:IPI00241780.1|REFSEQ\_XP:XP\_302541 Tax\_Id=9606 similar to meningioma-expressed antigen 11

144. EEGCD: 34738, >IPI:IPI00333423.1|ENSEMBL:ENSP00000329913 Tax\_Id=9606

145. DCEGE: 34770, >IPI:IPI00011227.1|SWISS-  
 PROT:P21918|REFSEQ\_NP:NP\_000789|TREMBL:Q8NEQ8|ENSEMBL:ENSP00000306129  
 Tax\_Id=9606 D(1B) dopamine **receptor**

146. DCGEE: 34788, >IPI:IPI00020083.1|SWISS-PROT:Q15878-  
 1|TREMBL:Q9NY05;Q9UN68;Q9NYZ6|ENSEMBL:ENSP00000252150;ENSP00000252151  
 Tax\_Id=9606 Splice isoform Alpha-1E-3 of Q15878 Voltage-dependent R-type  
**calcium** channel alpha-1E subunit

147. DCGEE: 34794, >IPI:IPI00218338.1|SWISS-PROT:Q15878-  
 2|REFSEQ\_NP:NP\_000712|ENSEMBL:ENSP00000308642 Tax\_Id=9606 Splice isoform  
 Alpha-1E-1 of Q15878 Voltage-dependent R-type **calcium** channel alpha-1E  
 subunit

148. DECGE: 35582, >IPI:IPI00004957.1|SWISS-  
 PROT:Q9Y5C1|REFSEQ\_NP:NP\_055310|ENSEMBL:ENSP00000255208 Tax\_Id=9606  
 Angiopoietin-related protein 3 precursor

149. EDGCE: 35928, >IPI:IPI00002493.1|TREMBL:Q9Y5J4|ENSEMBL:ENSP00000321781  
 Tax\_Id=9606 Pyrroline 5-carboxylate reductase isoform

150. ECEGD: 37020, >IPI:IPI00242598.1|REFSEQ\_XP:XP\_299197 Tax\_Id=9606  
 hypothetical protein XP\_299197

151. EDGE: 37310, >IPI:IPI00077853.1|SWISS-PROT:Q96SU4-  
 1|REFSEQ\_NP:NP\_078862|ENSEMBL:ENSP00000303944 Tax\_Id=9606 Splice isoform 1 of  
 Q96SU4 Oxysterol binding protein-related protein 9

152. EDGE: 37314, >IPI:IPI00218449.1|SWISS-PROT:Q96SU4-  
 2|REFSEQ\_NP:NP\_683706 Tax\_Id=9606 Splice isoform 2 of Q96SU4 Oxysterol  
 binding protein-related protein 9

153. ECEDG: 37612, >IPI:IPI00016698.1|SWISS-PROT:Q9UEU5|REFSEQ\_NP:NP\_036328  
 Tax\_Id=9606 GAGE-8 protein

154. GEDCE: 37860, >IPI:IPI00021968.1|SWISS-  
 PROT:Q9Y6Q6|REFSEQ\_NP:NP\_003830|ENSEMBL:ENSP00000269485 Tax\_Id=9606 Tumor  
 necrosis factor **receptor** superfamily member 11A precursor

155. GDCEE: 37890,  
 >IPI:IPI00098997.1|REFSEQ\_NP:NP\_003750|TREMBL:O15153;Q9Y6R1;Q9H262;Q9UIC0;Q9U  
 IC1|ENSEMBL:ENSP00000264485 Tax\_Id=9606 Pancreas **sodium** bicarbonate  
 cotransporter

156. GDCEE: 37894, >IPI:IPI00002561.1|TREMBL:Q9Y6R3 Tax\_Id=9606 Electrogenic  
**Na<sup>+</sup>** bicarbonate cotransporter

157. CGDEE: 38394,  
 >IPI:IPI00069309.1|REFSEQ\_NP:NP\_690852|TREMBL:Q8N0T9;Q8WV43;Q96GJ2;Q9UFC0|ENS  
 EMBL:ENSP00000292616 Tax\_Id=9606 Hypothetical protein

158. EDCGE: 38398, >IPI:IPI00004623.1|TREMBL:Q9UFC1|ENSEMBL:ENSP00000307039  
 Tax\_Id=9606 Hypothetical protein

159. EDCEG: 38940, >IPI:IPI00243356.1|REFSEQ\_XP:XP\_304057 Tax\_Id=9606  
 hypothetical protein XP\_304057

160. GEDCE: 38940, >IPI:IPI00243356.1|REFSEQ\_XP:XP\_304057 Tax\_Id=9606  
hypothetical protein XP\_304057

161. GEEDC: 39992, >IPI:IPI00104867.1|ENSEMBL:ENSP00000301357 Tax\_Id=9606

162. CDEEG: 40410, >IPI:IPI00159268.1|REFSEQ\_XP:XP\_172950 Tax\_Id=9606  
hypothetical protein XP\_172950

163. EDEGC: 40844, >IPI:IPI00243959.1|REFSEQ\_XP:XP\_292142 Tax\_Id=9606  
similar to bromodomain containing 7

164. EDCEG: 40916, >IPI:IPI00243988.1|REFSEQ\_XP:XP\_304157 Tax\_Id=9606  
hypothetical protein XP\_304157

165. EGDCE: 41000, >IPI:IPI00002284.1|SWISS-  
PROT:Q9UGP5|REFSEQ\_NP:NP\_037406|TREMBL:Q9HAJ3|ENSEMBL:ENSP00000299206  
Tax\_Id=9606 DNA polymerase lambda

166. CEEGD: 41850, >IPI:IPI00244195.1|REFSEQ\_XP:XP\_299401 Tax\_Id=9606  
hypothetical protein XP\_299401

167. CEDGE: 42152, >IPI:IPI00025276.1|SWISS-PROT:P22105-  
1|REFSEQ\_NP:NP\_061978|TREMBL:Q9UC13;Q9UC12;Q9UC11;Q8N4R1;Q9UE34;Q9NPK7;O95681  
;O95682;Q9Y464|ENSEMBL:ENSP00000211407;ENSP00000299669;ENSP00000329801  
Tax\_Id=9606 Splice isoform XB of P22105 Tenascin-X precursor

168. DCGEE: 42152, >IPI:IPI00025276.1|SWISS-PROT:P22105-  
1|REFSEQ\_NP:NP\_061978|TREMBL:Q9UC13;Q9UC12;Q9UC11;Q8N4R1;Q9UE34;Q9NPK7;O95681  
;O95682;Q9Y464|ENSEMBL:ENSP00000211407;ENSP00000299669;ENSP00000329801  
Tax\_Id=9606 Splice isoform XB of P22105 Tenascin-X precursor

169. EDCGE: 42152, >IPI:IPI00025276.1|SWISS-PROT:P22105-  
1|REFSEQ\_NP:NP\_061978|TREMBL:Q9UC13;Q9UC12;Q9UC11;Q8N4R1;Q9UE34;Q9NPK7;O95681  
;O95682;Q9Y464|ENSEMBL:ENSP00000211407;ENSP00000299669;ENSP00000329801  
Tax\_Id=9606 Splice isoform XB of P22105 Tenascin-X precursor

170. EDGE C: 42152, >IPI:IPI00025276.1|SWISS-PROT:P22105-  
1|REFSEQ\_NP:NP\_061978|TREMBL:Q9UC13;Q9UC12;Q9UC11;Q8N4R1;Q9UE34;Q9NPK7;O95681  
;O95682;Q9Y464|ENSEMBL:ENSP00000211407;ENSP00000299669;ENSP00000329801  
Tax\_Id=9606 Splice isoform XB of P22105 Tenascin-X precursor

171. DCGEE: 42156, >IPI:IPI00218639.1|SWISS-PROT:P22105-  
2|REFSEQ\_NP:NP\_115859|ENSEMBL:ENSP00000333864;ENSP00000330575 Tax\_Id=9606  
Splice isoform XB-short of P22105 Tenascin-X precursor

172. DECGE: 42464,  
>IPI:IPI00328412.1|REFSEQ\_NP:NP\_115823|TREMBL:Q86SJ5|ENSEMBL:ENSP00000270509  
Tax\_Id=9606 Fibrillin-3 short form precursor transcript variant 1

173. EDECG: 42464,  
>IPI:IPI00328412.1|REFSEQ\_NP:NP\_115823|TREMBL:Q86SJ5|ENSEMBL:ENSP00000270509  
Tax\_Id=9606 Fibrillin-3 short form precursor transcript variant 1

174. GEECD: 43964, >IPI:IPI00079482.1|SWISS-PROT:Q9BZ11-  
1|REFSEQ\_NP:NP\_079496|TREMBL:Q8N0W6;Q8N6B9|ENSEMBL:ENSP00000278788  
Tax\_Id=9606 Splice isoform 1 of Q9BZ11 ADAM 33 precursor

175. GEECD: 43974, >IPI:IPI00218715.1|SWISS-PROT:Q9BZ11-2|REFSEQ NP:NP\_694882|ENSEMBL:ENSP00000322550 Tax\_Id=9606 Splice isoform 2 of Q9BZ11 ADAM 33 precursor

176. GEECD: 44974, >IPI:IPI00181689.1|SWISS-PROT:O43184-2|REFSEQ NP:NP\_067673|ENSEMBL:ENSP00000310004 Tax\_Id=9606 Splice isoform 12S of O43184 ADAM 12 precursor

177. EEGDC: 45106, >IPI:IPI00245008.1|REFSEQ\_XP:XP\_304348 Tax\_Id=9606 hypothetical protein XP\_304348

178. EGCDE: 45166, >IPI:IPI00245026.1|REFSEQ\_XP:XP\_292354 Tax\_Id=9606 similar to prohibitin

179. EEGCD: 45344, >IPI:IPI00333835.1|ENSEMBL:ENSP00000308853 Tax\_Id=9606

180. GDCEE: 45448, >IPI:IPI00166570.2|TREMBL:Q8N3L3;Q8N3S2;Q86T52|ENSEMBL:ENSP00000321883 Tax\_Id=9606 Hypothetical protein DKFZp451F022

181. EGDEC: 45712, >IPI:IPI00166602.1|TREMBL:Q8N3R5;Q8N1M9 Tax\_Id=9606 Hypothetical protein

182. DCEEG: 45754, >IPI:IPI00296542.1|SWISS-PROT:P16581|REFSEQ NP:NP\_000441|ENSEMBL:ENSP00000066315 Tax\_Id=9606 E-selectin precursor

183. CDEGE: 46368, >IPI:IPI00181793.1|SWISS-PROT:P10911|REFSEQ NP:NP\_005360|TREMBL:Q8IUF4;Q9UJB3;Q8IUF3|ENSEMBL:ENSP00000218094 Tax\_Id=9606 Hypothetical protein

184. DEGEC: 46368, >IPI:IPI00181793.1|SWISS-PROT:P10911|REFSEQ NP:NP\_005360|TREMBL:Q8IUF4;Q9UJB3;Q8IUF3|ENSEMBL:ENSP00000218094 Tax\_Id=9606 Hypothetical protein

185. CDGEE: 46970, >IPI:IPI00328785.1|TREMBL:Q86V27 Tax\_Id=9606 Similar to low density lipoprotein receptor-related protein 8, apolipoprotein e receptor

186. CEDEG: 47272, >IPI:IPI00166717.1|TREMBL:Q8N4K6 Tax\_Id=9606 Similar to chromosome 11 hypothetical protein ORF4

187. EDEGC: 47272, >IPI:IPI00166717.1|TREMBL:Q8N4K6 Tax\_Id=9606 Similar to chromosome 11 hypothetical protein ORF4

188. CEEDG: 47288, >IPI:IPI00245636.1|REFSEQ\_XP:XP\_292482|ENSEMBL:ENSP00000333450 Tax\_Id=9606 similar to U3 small nucleolar ribonucleoprotein protein MPP10 (M phase phosphoprotein 10)

189. CGEED: 47416, >IPI:IPI00007087.1|SWISS-PROT:Q9UK22 Tax\_Id=9606 F-box only protein 2

190. CEEGD: 47622, >IPI:IPI00008210.1|REFSEQ NP:NP\_057305|TREMBL:Q9NSJ5;Q9UJW0|ENSEMBL:ENSP00000255263 Tax\_Id=9606 Dynactin P62 subunit

**191.** ECEDG: 47948,  
>IPI:IPI00166789.1|REFSEQ\_NP:NP\_690875|TREMBL:Q8NCX3;Q8N555;Q86WP9|ENSEMBL:ENSP00000278060 Tax\_Id=9606 Similar to chromosome 20 open reading frame 16

**192.** EGEDC: 48062,  
>IPI:IPI00296830.1|TREMBL:Q8N4X3|REFSEQ\_XP:XP\_290932|ENSEMBL:ENSP00000303758 Tax\_Id=9606 Similar to FLJ00226 protein

**193.** CGEDE: 49572,  
>IPI:IPI00002545.1|REFSEQ\_NP:NP\_037496|TREMBL:Q9H0A4;Q9UL41 Tax\_Id=9606 Paraneoplastic neuronal antigen MA3

**194.** EDCGE: 49572,  
>IPI:IPI00002545.1|REFSEQ\_NP:NP\_037496|TREMBL:Q9H0A4;Q9UL41 Tax\_Id=9606 Paraneoplastic neuronal antigen MA3

**195.** GCEED: 49892, >IPI:IPI00297089.1|SWISS-PROT:Q13023|REFSEQ\_NP:NP\_004265|ENSEMBL:ENSP00000280979 Tax\_Id=9606 A-kinase anchor protein 6

**196.** ECEDG: 50158, >IPI:IPI00011526.1|SWISS-PROT:Q13065|REFSEQ\_NP:NP\_001459|TREMBL:Q8IYC5|ENSEMBL:ENSP00000217878 Tax\_Id=9606 GAGE-1 protein

**197.** ECEDG: 50160, >IPI:IPI00011527.1|SWISS-PROT:Q13066|REFSEQ\_NP:NP\_001463|ENSEMBL:ENSP00000327927 Tax\_Id=9606 GAGE-2 protein

**198.** ECEDG: 50166, >IPI:IPI00011529.1|SWISS-PROT:Q13067 Tax\_Id=9606 GAGE-3 protein

**199.** ECEDG: 50176, >IPI:IPI00011530.1|SWISS-PROT:Q13068|REFSEQ\_NP:NP\_001465|ENSEMBL:ENSP00000309195;ENSP00000331882;ENSP00000333538 Tax\_Id=9606 GAGE-4 protein

**200.** ECEDG: 50180, >IPI:IPI00011531.1|SWISS-PROT:Q13069|REFSEQ\_NP:NP\_001466 Tax\_Id=9606 GAGE-5 protein

**201.** ECEDG: 50232, >IPI:IPI00011545.1|SWISS-PROT:Q13070|REFSEQ\_NP:NP\_001467 Tax\_Id=9606 GAGE-6 protein

**202.** DGEEC: 50486, >IPI:IPI00246380.1|REFSEQ\_XP:XP\_299867 Tax\_Id=9606 hypothetical protein XP\_299867

**203.** EDEGC: 50594,  
>IPI:IPI00329085.1|REFSEQ\_NP:NP\_115582|TREMBL:Q8NF42;Q86WI3;Q8TEE2;Q969L7|ENSEMBL:ENSP00000262510;ENSP00000308886 Tax\_Id=9606 NOD27

**204.** DCEEG: 50676,  
>IPI:IPI00166972.1|TREMBL:Q8IY05;Q9ULD9;Q9UFL4;Q9Y5A1|REFSEQ\_XP:XP\_114432|ENSEMBL:ENSP00000307746 Tax\_Id=9606 KIAA1281 protein

**205.** CEEGD: 50882,  
>IPI:IPI00297250.1|TREMBL:O60290|REFSEQ\_XP:XP\_044213|ENSEMBL:ENSP00000223210 Tax\_Id=9606 Hypothetical protein KIAA0543

206. CEEDG: 51488,  
>IPI:IPI00329142.1|TREMBL:Q86X53;Q9P063|REFSEQ\_XP:XP\_291282|ENSEMBL:ENSP00000262109 Tax\_Id=9606 Hypothetical protein

207. EDEGC: 51612, >IPI:IPI00014186.2|SWISS-PROT:Q15911-1|REFSEQ\_NP:NP\_008816|TREMBL:Q8N2Y6|ENSEMBL:ENSP00000268489 Tax\_Id=9606 Splice isoform A of Q15911 Alpha-fetoprotein enhancer binding protein

208. DECEG: 51624, >IPI:IPI00002657.1|SWISS-PROT:Q9UBL6-1|REFSEQ\_NP:NP\_055242|ENSEMBL:ENSP00000317374 Tax\_Id=9606 Splice isoform 1 of Q9UBL6 Copine VII

209. DECEG: 51628, >IPI:IPI00219004.1|SWISS-PROT:Q9UBL6-2|REFSEQ\_NP:NP\_705900|ENSEMBL:ENSP00000268720 Tax\_Id=9606 Splice isoform 2 of Q9UBL6 Copine VII

210. GEDCE: 51754, >IPI:IPI00334146.1|ENSEMBL:ENSP00000333231 Tax\_Id=9606

211. EEGCD: 52252,  
>IPI:IPI00167074.1|REFSEQ\_NP:NP\_689735|TREMBL:Q8N6S5|ENSEMBL:ENSP00000315357 Tax\_Id=9606 Similar to putative

212. EGCED: 52548,  
>IPI:IPI00329675.4|REFSEQ\_NP:NP\_777603|TREMBL:Q8N769|ENSEMBL:ENSP00000323279 Tax\_Id=9606 Hypothetical protein FLJ25976

213. EEDGC: 52708, >IPI:IPI00246930.1|REFSEQ\_XP:XP\_299935 Tax\_Id=9606 hypothetical protein XP\_299935

214. GCEDE: 52936,  
>IPI:IPI00007325.1|REFSEQ\_NP:NP\_006327|TREMBL:Q9BV66;O00156|ENSEMBL:ENSP00000291900 Tax\_Id=9606 ZYG homologue

215. GEECD: 53132, >IPI:IPI00220973.3|SWISS-PROT:Q9Y215-5|REFSEQ\_NP:NP\_536802|ENSEMBL:ENSP00000324883 Tax\_Id=9606 Splice isoform V of Q9Y215 Acetylcholinesterase collagenic tail peptide precursor

216. EGEDC: 53194, >IPI:IPI00008692.1|SWISS-PROT:O76013|REFSEQ\_NP:NP\_003762|TREMBL:Q86XG4|ENSEMBL:ENSP00000329272 Tax\_Id=9606 Keratin, type I cuticular HA6

217. GEECD: 53206, >IPI:IPI00329242.1|TREMBL:Q86XK9 Tax\_Id=9606 Hypothetical protein

218. DGEEC: 53346,  
>IPI:IPI00329260.1|REFSEQ\_NP:NP\_733837;NP\_079414|TREMBL:Q8N3P1;Q9H9M1;Q86XN7;Q8N3D2|ENSEMBL:ENSP00000239877;ENSP00000332034 Tax\_Id=9606 KIAA2032 protein

219. EDGCE: 53454, >IPI:IPI00022561.1|SWISS-PROT:O76064|REFSEQ\_NP:NP\_003949|ENSEMBL:ENSP00000229866 Tax\_Id=9606 RING finger protein 8

220. ECEDG: 53628, >IPI:IPI00008809.1|SWISS-PROT:O76087|REFSEQ\_NP:NP\_001468;NP\_066946|ENSEMBL:ENSP00000329716;ENSP00000331424;ENSP00000331056 Tax\_Id=9606 GAGE-7 protein

221. ECEDG: 53686, >IPI:IPI00013908.1|SWISS-PROT:P25391|REFSEQ\_XP:XP\_209080|ENSEMBL:ENSP00000332581 Tax\_Id=9606 Laminin alpha-1 chain precursor

222. GCDEE: 53784, >IPI:IPI00219249.2|SWISS-PROT:P78357|REFSEQ\_NP:NP\_003623|ENSEMBL:ENSP00000264638 Tax\_Id=9606 Contactin associated protein 1 precursor

223. EDGE: 54034, >IPI:IPI00247213.1|REFSEQ\_XP:XP\_292770 Tax\_Id=9606 similar to Seminal plasma protein HSP-1

224. CEDGE: 54144, >IPI:IPI00247236.1|REFSEQ\_XP:XP\_292781 Tax\_Id=9606 similar to alpha tectorin

225. GEECD: 54392, >IPI:IPI00013897.1|SWISS-PROT:O14672|REFSEQ\_NP:NP\_001101|ENSEMBL:ENSP00000260408 Tax\_Id=9606 ADAM 10 precursor

226. CEDGE: 54624, >IPI:IPI00334240.1|ENSEMBL:ENSP00000333382 Tax\_Id=9606

227. DCGEE: 54624, >IPI:IPI00334240.1|ENSEMBL:ENSP00000333382 Tax\_Id=9606

228. EDCGE: 54624, >IPI:IPI00334240.1|ENSEMBL:ENSP00000333382 Tax\_Id=9606

229. EDGE: 54624, >IPI:IPI00334240.1|ENSEMBL:ENSP00000333382 Tax\_Id=9606

230. GECED: 54664, >IPI:IPI00012269.1|SWISS-PROT:Q13201|REFSEQ\_NP:NP\_031377|ENSEMBL:ENSP00000264790 Tax\_Id=9606 Endothelial cell multimerin precursor

231. CEDGE: 55122, >IPI:IPI00297990.1|TREMBL:Q8N7X6|ENSEMBL:ENSP00000311258 Tax\_Id=9606 Hypothetical protein FLJ40237

232. ECGED: 55226, >IPI:IPI00028828.1|SWISS-PROT:O95125-1|REFSEQ\_NP:NP\_003446|TREMBL:Q9NSM4|ENSEMBL:ENSP00000299336;ENSP00000325480 Tax\_Id=9606 Splice isoform Beta of O95125 Zinc finger protein 202

233. EEDCG: 55226, >IPI:IPI00028828.1|SWISS-PROT:O95125-1|REFSEQ\_NP:NP\_003446|TREMBL:Q9NSM4|ENSEMBL:ENSP00000299336;ENSP00000325480 Tax\_Id=9606 Splice isoform Beta of O95125 Zinc finger protein 202

234. ECGED: 55228, >IPI:IPI00219137.1|SWISS-PROT:O95125-2|TREMBL:Q9Y5A5 Tax\_Id=9606 Splice isoform Alpha of O95125 Zinc finger protein 202

235. EEDCG: 55228, >IPI:IPI00219137.1|SWISS-PROT:O95125-2|TREMBL:Q9Y5A5 Tax\_Id=9606 Splice isoform Alpha of O95125 Zinc finger protein 202

236. EEDCG: 55450, >IPI:IPI00247543.1|REFSEQ\_NP:NP\_055114|TREMBL:O60433|ENSEMBL:ENSP00000304499 Tax\_Id=9606 R31546\_1

237. GEECD: 55450, >IPI:IPI00247543.1|REFSEQ\_NP:NP\_055114|TREMBL:O60433|ENSEMBL:ENSP00000304499 Tax\_Id=9606 R31546\_1

238. EDCEG: 56090, >IPI:IPI00175989.4|REFSEQ\_NP:NP\_055893|TREMBL:Q8N318;O94942;Q86YR7|ENSEMBL:EN

SP00000265597;ENSP00000328118 Tax\_Id=9606 Rho family guanine-nucleotide exchange factor

**239.** CEEGD: 56236,  
>IPI:IPI00334281.1|REFSEQ\_NP:NP\_861452|ENSEMBL:ENSP00000286680 Tax\_Id=9606  
hypothetical protein LOC286148

**240.** EEDGC: 56650,  
>IPI:IPI00182585.1|REFSEQ\_NP:NP\_003911|TREMBL:Q9UNS1;Q86VM1;Q8IWH3|ENSEMBL:EN  
SP00000229201 Tax\_Id=9606 Timeless homolog

**241.** CDGEE: 56846, >IPI:IPI00167525.1|TREMBL:Q8N8P8 Tax\_Id=9606 Hypothetical  
protein FLJ39054

**242.** ECEDG: 56910,  
>IPI:IPI00182635.2|ENSEMBL:ENSP00000319044;ENSP00000319050 Tax\_Id=9606

**243.** CGDEE: 57160, >IPI:IPI00012759.1|SWISS-  
PROT:Q13329|REFSEQ\_NP:NP\_006641|ENSEMBL:ENSP00000274620 Tax\_Id=9606 Complexin  
2

**244.** CEDGE: 57472,  
>IPI:IPI00175361.2|REFSEQ\_XP:XP\_209869|ENSEMBL:ENSP00000333544 Tax\_Id=9606  
hypothetical protein XP\_209869

**245.** DCEGE: 57918,  
>IPI:IPI00182722.1|REFSEQ\_NP:NP\_004839|TREMBL:O60560|ENSEMBL:ENSP00000329862  
Tax\_Id=9606 ICB-1

**246.** CEEGD: 58208, >IPI:IPI00298524.1|TREMBL:Q8N9E5 Tax\_Id=9606 Hypothetical  
protein FLJ37649

**247.** DCEEG: 58828, >IPI:IPI00024254.1|SWISS-  
PROT:O14879|REFSEQ\_NP:NP\_001540|ENSEMBL:ENSP00000238972 Tax\_Id=9606  
Interferon-induced protein with tetratricopeptide repeats 4

**248.** DCEEG: 58842, >IPI:IPI00018300.1|SWISS-  
PROT:P09914|REFSEQ\_NP:NP\_001539|ENSEMBL:ENSP00000328042 Tax\_Id=9606  
Interferon-induced protein with tetratricopeptide repeats 1

**249.** GDCEE: 58904, >IPI:IPI00298624.1|TREMBL:Q9UP50 Tax\_Id=9606 **Sodium**  
bicarbonate cotransporter

**250.** EDCEG: 58942, >IPI:IPI00001805.3|TREMBL:Q9P281|ENSEMBL:ENSP00000303486  
Tax\_Id=9606 Hypothetical protein KIAA1447

**251.** EEDCG: 58942, >IPI:IPI00001805.3|TREMBL:Q9P281|ENSEMBL:ENSP00000303486  
Tax\_Id=9606 Hypothetical protein KIAA1447

**252.** DEEGC: 58978,  
>IPI:IPI00054595.1|REFSEQ\_NP:NP\_002326|TREMBL:Q9UP66;Q96TD6;Q9UES7|ENSEMBL:EN  
SP00000294304 Tax\_Id=9606 Low-density lipoprotein **receptor**-related protein 5

**253.** CEGED: 59064,  
>IPI:IPI00183739.1|TREMBL:Q8N9R2;Q8NAA7;Q8NCM5|ENSEMBL:ENSP00000319909  
Tax\_Id=9606 Hypothetical protein FLJ36696

254. CEEGD: 59148, >IPI:IPI00334393.1|REFSEQ\_XP:XP\_209917 Tax\_Id=9606 similar to hypothetical protein FLJ32949

255. GDECE: 59304, >IPI:IPI00167814.1|TREMBL:Q8N9U3 Tax\_Id=9606 Hypothetical protein FLJ36512

256. GEECD: 59348, >IPI:IPI00021905.1|SWISS-PROT:Q13443|REFSEQ\_NP:NP\_003807|TREMBL:Q8NFM6|ENSEMBL:ENSP00000305538 Tax\_Id=9606 ADAM 9 precursor

257. EGCDE: 59580, >IPI:IPI00298758.1|SWISS-PROT:O60602|REFSEQ\_NP:NP\_003259 Tax\_Id=9606 Toll-like receptor 5 precursor

258. GCDEE: 59580, >IPI:IPI00298758.1|SWISS-PROT:O60602|REFSEQ\_NP:NP\_003259 Tax\_Id=9606 Toll-like receptor 5 precursor

259. ECDEG: 59660, >IPI:IPI00018370.1|REFSEQ\_NP:NP\_003165|TREMBL:O60612|ENSEMBL:ENSP00000263058 Tax\_Id=9606 Supervillin

260. CDGEE: 60296, >IPI:IPI00020929.1|REFSEQ\_NP:NP\_150643|TREMBL:O14968|ENSEMBL:ENSP00000321568 Tax\_Id=9606 ApoER2delta4-7

261. ECEDG: 60306, >IPI:IPI00024273.1|SWISS-PROT:P98155-1|REFSEQ\_NP:NP\_003374|ENSEMBL:ENSP00000327160 Tax\_Id=9606 Splice isoform Long of P98155 Very low-density lipoprotein receptor precursor

262. ECEDG: 60308, >IPI:IPI00219353.1|SWISS-PROT:P98155-2 Tax\_Id=9606 Splice isoform Short of P98155 Very low-density lipoprotein receptor precursor

263. EEGDC: 60386, >IPI:IPI00004358.2|SWISS-PROT:P11216|REFSEQ\_NP:NP\_002853|TREMBL:Q8TDG6|ENSEMBL:ENSP00000216962 Tax\_Id=9606 Glycogen phosphorylase, brain form

264. EEGDC: 60398, >IPI:IPI00023177.1|SWISS-PROT:Q13111-1|REFSEQ\_NP:NP\_005474|ENSEMBL:ENSP00000301280 Tax\_Id=9606 Splice isoform 1 of Q13111 Chromatin assembly factor 1 subunit A

265. EDEGC: 60868, >IPI:IPI00179185.1|REFSEQ\_NP:NP\_003643|TREMBL:O00520;Q9BRA7|ENSEMBL:ENSP00000315074 Tax\_Id=9606 Carboxypeptidase Z precursor

266. ECEGD: 60924, >IPI:IPI00248855.1|REFSEQ\_XP:XP\_294313 Tax\_Id=9606 similar to Multifunctional protein ADE2

267. GEEDC: 61238, >IPI:IPI00028136.1|REFSEQ\_NP:NP\_066978|TREMBL:Q96QQ4;Q96QQ0;Q9NNX6;Q96QQ8|ENSEMBL:ENSP00000315477 Tax\_Id=9606 Membrane-associated lectin type-C

268. ECGED: 61396, >IPI:IPI00000151.1|SWISS-PROT:P18564|REFSEQ\_NP:NP\_000879|ENSEMBL:ENSP00000283249 Tax\_Id=9606 Integrin beta-6 precursor

269. ECEDG: 61406, >IPI:IPI00010746.1|SWISS-PROT:P48651|REFSEQ\_NP:NP\_055569|TREMBL:Q9BSY0|ENSEMBL:ENSP00000287028 Tax\_Id=9606 Phosphatidylserine synthase I

**270.** GEEDC: 61658,  
 >IPI:IPI00334503.1|REFSEQ\_NP:NP\_065175|TREMBL:Q9UFH7;Q96GN2;Q9H6B7|ENSEMBL:EN  
 SP00000319338 Tax\_Id=9606 KIAA1885 protein

**271.** ECDEG: 61774, >IPI:IPI00014310.1|SWISS-  
 PROT:Q13616|REFSEQ\_NP:NP\_003583|ENSEMBL:ENSP00000326804 Tax\_Id=9606 Cullin  
 homolog 1

**272.** CEDGE: 61992, >IPI:IPI00299219.1|SWISS-  
 PROT:O00622|REFSEQ\_NP:NP\_001545|ENSEMBL:ENSP00000271019 Tax\_Id=9606 CYR61  
 protein precursor

**273.** CEDEG: 62044, >IPI:IPI00007365.1|SWISS-  
 PROT:O00635|REFSEQ\_NP:NP\_006346|ENSEMBL:ENSP00000230099 Tax\_Id=9606 RING  
 finger protein 15

**274.** CDGEE: 62288, >IPI:IPI00249276.1|REFSEQ\_XP:XP\_294475 Tax\_Id=9606  
 similar to Asparaginyl-tRNA synthetase, cytoplasmic (Asparagine--tRNA ligase)  
 (AsnRS)

**275.** CDGEE: 62934, >IPI:IPI00012793.1|SWISS-PROT:Q13342-  
 1|REFSEQ\_NP:NP\_009168|TREMBL:Q8IWJ1 Tax\_Id=9606 Splice isoform LYSp100-B of  
 Q13342 LYSp100 protein

**276.** CDGEE: 62938, >IPI:IPI00219535.1|SWISS-PROT:Q13342-2 Tax\_Id=9606 Splice  
 isoform LYSp100-A of Q13342 LYSp100 protein

**277.** CDGEE: 62940, >IPI:IPI00219536.1|SWISS-PROT:Q13342-  
 3|ENSEMBL:ENSP00000181092 Tax\_Id=9606 Splice isoform Sp140 of Q13342 LYSp100  
 protein

**278.** DCGEE: 62964,  
 >IPI:IPI00014972.1|TREMBL:Q9NPK8|ENSEMBL:ENSP00000309032;ENSP00000328558  
 Tax\_Id=9606 DJ34F7.1.2 (Tenascin XB)

**279.** EDCGE: 62964,  
 >IPI:IPI00014972.1|TREMBL:Q9NPK8|ENSEMBL:ENSP00000309032;ENSP00000328558  
 Tax\_Id=9606 DJ34F7.1.2 (Tenascin XB)

**280.** CEDGE: 62966, >IPI:IPI00334575.1|TREMBL:Q9NPK9|ENSEMBL:ENSP00000330143  
 Tax\_Id=9606 DJ34F7.1.1 (Tenascin XB)

**281.** DCGEE: 62966, >IPI:IPI00334575.1|TREMBL:Q9NPK9|ENSEMBL:ENSP00000330143  
 Tax\_Id=9606 DJ34F7.1.1 (Tenascin XB)

**282.** EDCGE: 62966, >IPI:IPI00334575.1|TREMBL:Q9NPK9|ENSEMBL:ENSP00000330143  
 Tax\_Id=9606 DJ34F7.1.1 (Tenascin XB)

**283.** EDGE: 62966, >IPI:IPI00334575.1|TREMBL:Q9NPK9|ENSEMBL:ENSP00000330143  
 Tax\_Id=9606 DJ34F7.1.1 (Tenascin XB)

**284.** EEGCD: 63136, >IPI:IPI00023014.1|SWISS-  
 PROT:P04275|REFSEQ\_NP:NP\_000543|TREMBL:Q99806;Q9UD22|ENSEMBL:ENSP00000261405  
 Tax\_Id=9606 Von Willebrand factor precursor

285. ECGDE: 63610,  
>IPI:IPI00033553.1|REFSEQ\_NP:NP\_065106|TREMBL:Q9H847;Q9NQ90|ENSEMBL:ENSP00000314048 Tax\_Id=9606 Hypothetical protein

286. DCGEE: 63848, >IPI:IPI00011901.2|SWISS-PROT:Q9H013-1|REFSEQ\_NP:NP\_075525|TREMBL:Q8TBU7;Q8N504 Tax\_Id=9606 Splice isoform A of Q9H013 ADAM 19 precursor

287. DGEEC: 63848, >IPI:IPI00011901.2|SWISS-PROT:Q9H013-1|REFSEQ\_NP:NP\_075525|TREMBL:Q8TBU7;Q8N504 Tax\_Id=9606 Splice isoform A of Q9H013 ADAM 19 precursor

288. GEECD: 63848, >IPI:IPI00011901.2|SWISS-PROT:Q9H013-1|REFSEQ\_NP:NP\_075525|TREMBL:Q8TBU7;Q8N504 Tax\_Id=9606 Splice isoform A of Q9H013 ADAM 19 precursor

289. DCGEE: 63850, >IPI:IPI00249735.1|SWISS-PROT:Q9H013-2|REFSEQ\_NP:NP\_150377|ENSEMBL:ENSP00000257527 Tax\_Id=9606 Splice isoform B of Q9H013 ADAM 19 precursor

290. DGEEC: 63850, >IPI:IPI00249735.1|SWISS-PROT:Q9H013-2|REFSEQ\_NP:NP\_150377|ENSEMBL:ENSP00000257527 Tax\_Id=9606 Splice isoform B of Q9H013 ADAM 19 precursor

291. GEECD: 63850, >IPI:IPI00249735.1|SWISS-PROT:Q9H013-2|REFSEQ\_NP:NP\_150377|ENSEMBL:ENSP00000257527 Tax\_Id=9606 Splice isoform B of Q9H013 ADAM 19 precursor

292. GEECD: 64386, >IPI:IPI00299652.1|SWISS-PROT:O75078-1|REFSEQ\_NP:NP\_002381|ENSEMBL:ENSP00000200557 Tax\_Id=9606 Splice isoform Long of O75078 ADAM 11 precursor

293. GEECD: 64388, >IPI:IPI00299653.1|SWISS-PROT:O75078-2|REFSEQ\_NP:NP\_067625 Tax\_Id=9606 Splice isoform Short of O75078 ADAM 11 precursor

294. CEEDG: 64522, >IPI:IPI00021427.1|SWISS-PROT:Q9NZL6-1 Tax\_Id=9606 Splice isoform A of Q9NZL6 Ral guanine nucleotide dissociation stimulator-like 1

295. CEEDG: 64528, >IPI:IPI00299679.1|SWISS-PROT:Q9NZL6-2|REFSEQ\_NP:NP\_055964|ENSEMBL:ENSP00000303192 Tax\_Id=9606 Splice isoform B of Q9NZL6 Ral guanine nucleotide dissociation stimulator-like 1

296. CEDGE: 64816, >IPI:IPI00334636.1|ENSEMBL:ENSP00000328067 Tax\_Id=9606

297. DCGEE: 64816, >IPI:IPI00334636.1|ENSEMBL:ENSP00000328067 Tax\_Id=9606

298. EDGE C: 64816, >IPI:IPI00334636.1|ENSEMBL:ENSP00000328067 Tax\_Id=9606

299. EGDEC: 65012, >IPI:IPI00033970.1|SWISS-PROT:Q9H2R5-1|REFSEQ\_NP:NP\_059979|ENSEMBL:ENSP00000301421 Tax\_Id=9606 Splice isoform 1 of Q9H2R5 Kallikrein 15 precursor

300. EGDEC: 65014, >IPI:IPI00150552.1|SWISS-PROT:Q9H2R5-2|REFSEQ\_NP:NP\_075382 Tax\_Id=9606 Splice isoform 2 of Q9H2R5 Kallikrein 15 precursor

**301.** EGDEC: 65018, >IPI:IPI00219692.1|SWISS-PROT:Q9H2R5-3|REFSEQ\_NP:NP\_612630|TREMBL:Q96RQ0 Tax\_Id=9606 Splice isoform 3 of Q9H2R5 Kallikrein 15 precursor

**302.** EGDEC: 65020, >IPI:IPI00219693.1|SWISS-PROT:Q9H2R5-4|REFSEQ\_NP:NP\_612631|ENSEMBL:ENSP00000314783 Tax\_Id=9606 Splice isoform 4 of Q9H2R5 Kallikrein 15 precursor

**303.** GEECD: 65516, >IPI:IPI00018146.1|SWISS-PROT:P27348|REFSEQ\_NP:NP\_006817|TREMBL:Q9UP48|ENSEMBL:ENSP00000238081 Tax\_Id=9606 14-3-3 protein tau

**304.** GDCEE: 66052, >IPI:IPI00016949.1|TREMBL:Q9NRZ1|ENSEMBL:ENSP00000307349 Tax\_Id=9606 **Sodium** bicarbonate cotransporter NBC1

**305.** EDGCE: 66446, >IPI:IPI00021466.1|REFSEQ\_NP:NP\_006442|TREMBL:Q9H074|ENSEMBL:ENSP00000302768 Tax\_Id=9606 Hypothetical protein

**306.** CEGED: 66934, >IPI:IPI00337657.1|REFSEQ\_NP:NP\_694972|TREMBL:Q96NK2|ENSEMBL:ENSP00000318348 Tax\_Id=9606 nephrocystin 3

**307.** EEDGC: 66976, >IPI:IPI00250876.1|REFSEQ\_XP:XP\_296098 Tax\_Id=9606 hypothetical protein XP\_296098

**308.** CEGED: 67040, >IPI:IPI00100787.1|REFSEQ\_NP:NP\_115636|TREMBL:Q9H0B2|ENSEMBL:ENSP00000272454; ENSP00000330023; ENSP00000327486 Tax\_Id=9606 Hypothetical protein

**309.** DCEGE: 67040, >IPI:IPI00100787.1|REFSEQ\_NP:NP\_115636|TREMBL:Q9H0B2|ENSEMBL:ENSP00000272454; ENSP00000330023; ENSP00000327486 Tax\_Id=9606 Hypothetical protein

**310.** EECGD: 67796, >IPI:IPI00006171.2|REFSEQ\_NP:NP\_006156|TREMBL:Q12869; Q15312; Q9H048|ENSEMBL:ENSP00000303800; ENSP00000315172 Tax\_Id=9606 R kappa B

**311.** ECEDG: 68094, >IPI:IPI00016645.1|SWISS-PROT:Q15375|REFSEQ\_NP:NP\_004431|TREMBL:Q8N368|ENSEMBL:ENSP00000257785 Tax\_Id=9606 Ephrin type-A **receptor** 7 precursor

**312.** EDEGC: 69284, >IPI:IPI00300576.1|SWISS-PROT:P43220|REFSEQ\_NP:NP\_002053|ENSEMBL:ENSP00000229900 Tax\_Id=9606 Glucagon-like peptide 1 **receptor** precursor

**313.** CEDGE: 69404, >IPI:IPI00334817.1|ENSEMBL:ENSP00000328379 Tax\_Id=9606

**314.** ECEDG: 69906, >IPI:IPI00168052.1|TREMBL:Q8NAN7 Tax\_Id=9606 Hypothetical protein FLJ35062

**315.** ECDGE: 70266, >IPI:IPI00057451.1|REFSEQ\_XP:XP\_060355 Tax\_Id=9606 similar to RIKEN cDNA 1810030J14

**316.** EDECG: 70422, >IPI:IPI00329580.4|REFSEQ\_NP:NP\_689966|TREMBL:Q8IX30; Q8NAV8; Q8NAU9|ENSEMBL:ENSP00000274938 Tax\_Id=9606 Hypothetical protein FLJ34743

317. GEECD: 71768, >IPI:IPI00023134.1|SWISS-PROT:Q9H2U9|REFSEQ\_NP:NP\_003808  
Tax\_Id=9606 ADAM 7 precursor

318. CEDGE: 71836,  
>IPI:IPI00170865.1|REFSEQ\_NP:NP\_690864|TREMBL:Q9H2V6|ENSEMBL:ENSP00000261449  
Tax\_Id=9606 Membrane-associated guanylate kinase-related MAGI-3

319. DEEGC: 72098, >IPI:IPI00057797.4|REFSEQ\_XP:XP\_060405 Tax\_Id=9606  
similar to MEGF6

320. CEDGE: 72452, >IPI:IPI00252375.1|REFSEQ\_XP:XP\_296374 Tax\_Id=9606  
hypothetical protein XP\_296374

321. EEC DG: 73116, >IPI:IPI00146811.1|REFSEQ\_XP:XP\_301149 Tax\_Id=9606  
similar to hypothetical protein

322. ECE DG: 73550,  
>IPI:IPI00334972.1|ENSEMBL:ENSP00000328574;ENSP00000332664 Tax\_Id=9606

323. CEGDE: 74738,  
>IPI:IPI00016724.1|REFSEQ\_NP:NP\_060393|TREMBL:Q8TCQ1;Q9NWR0|ENSEMBL:ENSP00000  
274056 Tax\_Id=9606 Hypothetical protein FLJ20668

324. DCGEE: 74744,  
>IPI:IPI00069363.1|REFSEQ\_XP:XP\_016093|ENSEMBL:ENSP00000316037 Tax\_Id=9606  
similar to eukaryotic initiation factor 5A

325. ECGED: 74890,  
>IPI:IPI00301812.1|REFSEQ\_NP:NP\_071420|TREMBL:Q9H4F8;Q96F78|ENSEMBL:ENSP00000  
238629 Tax\_Id=9606 Secreted modular calcium-binding protein precursor

326. EEDGC: 75218,  
>IPI:IPI00253046.1|REFSEQ\_XP:XP\_301273|ENSEMBL:ENSP00000303287 Tax\_Id=9606  
similar to hypothetical protein

327. GECDE: 75998, >IPI:IPI00253274.1|REFSEQ\_XP:XP\_296525 Tax\_Id=9606  
hypothetical protein XP\_296525

328. EDECG: 76060, >IPI:IPI00253294.1|REFSEQ\_XP:XP\_296538 Tax\_Id=9606  
hypothetical protein XP\_296538

329. ECGED: 76404, >IPI:IPI00176387.1|TREMBL:Q8NE58|ENSEMBL:ENSP00000313062  
Tax\_Id=9606 Hypothetical protein

330. ECGED: 76536, >IPI:IPI00168623.1|TREMBL:Q8NE87|ENSEMBL:ENSP00000324097  
Tax\_Id=9606 Hypothetical protein

331. DCEGE: 76560, >IPI:IPI00014890.1|SWISS-  
PROT:Q9NXR5|REFSEQ\_NP:NP\_060134|TREMBL:Q9NXQ9;Q9H6D6;Q8IUW1|ENSEMBL:ENSP00000  
267339 Tax\_Id=9606 Ankyrin repeat domain protein 10

332. EGDCE: 77184, >IPI:IPI00025365.1|SWISS-PROT:P14138-  
1|REFSEQ\_NP:NP\_000105|ENSEMBL:ENSP00000311854;ENSP00000326965 Tax\_Id=9606  
Splice isoform Long of P14138 Endothelin-3 precursor

333. GDCEE: 77184, >IPI:IPI00025365.1|SWISS-PROT:P14138-  
1|REFSEQ\_NP:NP\_000105|ENSEMBL:ENSP00000311854;ENSP00000326965 Tax\_Id=9606  
Splice isoform Long of P14138 Endothelin-3 precursor

334. EGDCE: 77186, >IPI:IPI00220210.1|SWISS-PROT:P14138-2 Tax\_Id=9606 Splice isoform Short of P14138 Endothelin-3 precursor

335. GDCEE: 77186, >IPI:IPI00220210.1|SWISS-PROT:P14138-2 Tax\_Id=9606 Splice isoform Short of P14138 Endothelin-3 precursor

336. DEGCE: 77234, >IPI:IPI00253545.1|REFSEQ\_XP:XP\_301395 Tax\_Id=9606 similar to neuronal apoptosis inhibitor protein 9

337. EGCED: 77234, >IPI:IPI00253545.1|REFSEQ\_XP:XP\_301395 Tax\_Id=9606 similar to neuronal apoptosis inhibitor protein 9

338. CEDGE: 77406, >IPI:IPI00302351.1|TREMBL:Q8NEF5 Tax\_Id=9606 Similar to serine/threonine kinase 33

339. GDCEE: 77704, >IPI:IPI00168680.1|TREMBL:Q8NEJ2 Tax\_Id=9606 Similar to solute carrier family 4, **sodium** bicarbonate cotransporter, member 4

340. CDGEE: 78456, >IPI:IPI00220259.1|SWISS-PROT:O95613|REFSEQ\_NP:NP\_006022|TREMBL:Q8IWIJ7|ENSEMBL:ENSP00000291695 Tax\_Id=9606 pericentrin B

341. GEDCE: 78564, >IPI:IPI00015345.1|SWISS-PROT:Q9NYQ7|REFSEQ\_NP:NP\_001398|ENSEMBL:ENSP00000164024 Tax\_Id=9606 Cadherin EGF LAG seven-pass G-type **receptor** 3 precursor

342. DCGEE: 79218, >IPI:IPI00165045.1|TREMBL:Q9NYZ5|ENSEMBL:ENSP00000327220 Tax\_Id=9606 **Calcium** channel alpha1E subunit, delta19 delta40 delta46 splice variant

343. EDEGC: 80064, >IPI:IPI00335249.1|TREMBL:Q9H6Y0|ENSEMBL:ENSP00000329394 Tax\_Id=9606 Hypothetical protein FLJ21709

344. EGCDE: 80226, >IPI:IPI00254385.1|REFSEQ\_XP:XP\_296731 Tax\_Id=9606 hypothetical protein XP\_296731

345. EGDCE: 80386, >IPI:IPI00002849.1|SWISS-PROT:P28324-1|REFSEQ\_NP:NP\_001964|TREMBL:Q8IXL1|ENSEMBL:ENSP00000289703 Tax\_Id=9606 Splice isoform 1 of P28324 ETS-domain protein ELK-4

346. EGDCE: 80392, >IPI:IPI00220318.1|SWISS-PROT:P28324-2|REFSEQ\_NP:NP\_068567 Tax\_Id=9606 Splice isoform 2 of P28324 ETS-domain protein ELK-4

347. EECGD: 80622, >IPI:IPI00025803.2|SWISS-PROT:P06213-1|REFSEQ\_NP:NP\_000199|TREMBL:Q86WY9;Q9UCB7;Q9UCB8;Q9UCB9|ENSEMBL:ENSP00000303830 Tax\_Id=9606 Splice isoform Long of P06213 **Insulin receptor** precursor

348. EECGD: 80624, >IPI:IPI00220325.2|SWISS-PROT:P06213-2 Tax\_Id=9606 Splice isoform Short of P06213 **Insulin receptor** precursor

349. CGDEE: 80916, >IPI:IPI00032063.1|REFSEQ\_NP:NP\_061027|TREMBL:Q8WY28;Q8WY27;Q9NZR2;Q8WY30;Q8WY31;Q8WY26;Q8WY29|ENSEMBL:ENSP00000307314;ENSP00000316011;ENSP00000333057 Tax\_Id=9606 Low density lipoprotein **receptor** related protein-deleted in tumor

**350.** EGEDC: 80918, >IPI:IPI00157417.1|SWISS-PROT:Q9BYH1-1|REFSEQ\_NP:NP\_066938|ENSEMBL:ENSP00000215905 Tax\_Id=9606 Splice isoform 4 of Q9BYH1 Seizure 6-like protein precursor

**351.** EGEDC: 80926, >IPI:IPI00163788.5|SWISS-PROT:Q9BYH1-2|ENSEMBL:ENSP00000248933 Tax\_Id=9606 Splice isoform 1 of Q9BYH1 Seizure 6-like protein precursor

**352.** EGEDC: 80928, >IPI:IPI00220333.1|SWISS-PROT:Q9BYH1-3 Tax\_Id=9606 Splice isoform 2 of Q9BYH1 Seizure 6-like protein precursor

**353.** EGEDC: 80932, >IPI:IPI00220334.1|SWISS-PROT:Q9BYH1-4 Tax\_Id=9606 Splice isoform 3 of Q9BYH1 Seizure 6-like protein precursor

**354.** EDGCE: 81198, >IPI:IPI00303274.1|TREMBL:Q96B61 Tax\_Id=9606 Polyadenylate binding protein-interacting protein 1

**355.** DCGEE: 81792, >IPI:IPI00335323.1|ENSEMBL:ENSP00000330151 Tax\_Id=9606

**356.** DGECE: 81834, >IPI:IPI00023824.1|SWISS-PROT:P98095|REFSEQ\_NP:NP\_001989|TREMBL:Q86V58|ENSEMBL:ENSP00000295760 Tax\_Id=9606 Fibulin-2 precursor

**357.** GECED: 81834, >IPI:IPI00023824.1|SWISS-PROT:P98095|REFSEQ\_NP:NP\_001989|TREMBL:Q86V58|ENSEMBL:ENSP00000295760 Tax\_Id=9606 Fibulin-2 precursor

**358.** ECGDE: 82610, >IPI:IPI00328847.2|REFSEQ\_NP:NP\_079047|TREMBL:Q9H897;Q86UY6|ENSEMBL:ENSP00000265463 Tax\_Id=9606 Hypothetical protein FLJ13848

**359.** GEDCE: 82722, >IPI:IPI00303595.1|TREMBL:Q96BJ0|ENSEMBL:ENSP00000253015 Tax\_Id=9606 Similar to uridine-cytidine kinase 1

**360.** EGCED: 83570, >IPI:IPI00100933.1|SWISS-PROT:Q96BW5|REFSEQ\_NP:NP\_109589|ENSEMBL:ENSP00000298942 Tax\_Id=9606 Phosphotriesterase related protein

**361.** EDGCE: 83906, >IPI:IPI00024292.1|SWISS-PROT:P98164|REFSEQ\_NP:NP\_004516|TREMBL:Q9NP34|ENSEMBL:ENSP00000263816 Tax\_Id=9606 Low-density lipoprotein **receptor**-related protein 2 precursor

**362.** ECEDG: 84438, >IPI:IPI00303963.1|SWISS-PROT:P06681|REFSEQ\_NP:NP\_000054|TREMBL:Q95IG1;O19694;Q8N6L6;Q86SV5|ENSEMBL:ENSP00000299367;ENSP00000319023;ENSP00000330581 Tax\_Id=9606 Complement C2 precursor

**363.** CDEGE: 84848, >IPI:IPI00169309.1|REFSEQ\_NP:NP\_689566|TREMBL:Q8NHS1|ENSEMBL:ENSP00000291715 Tax\_Id=9606 Similar to RIKEN cDNA 1700071E18 gene

**364.** ECEGD: 84966, >IPI:IPI00255906.1|REFSEQ\_XP:XP\_296987 Tax\_Id=9606 hypothetical protein XP\_296987

**365.** EDEGC: 85920, >IPI:IPI00335481.1|ENSEMBL:ENSP00000226892 Tax\_Id=9606

**366.** CDEEG: 86376,  
 >IPI:IPI00337759.1|REFSEQ\_NP:NP\_689961|TREMBL:Q96DP2|ENSEMBL:ENSP00000297222  
 Tax\_Id=9606 hypothetical protein FLJ31340

**367.** ECEGD: 87222,  
 >IPI:IPI00304540.4|TREMBL:Q9C0A2;Q8WUN4;Q8N598;Q96SN2|REFSEQ\_XP:XP\_042708|ENS  
 EMBL:ENSP00000322449 Tax\_Id=9606 Hypothetical protein KIAA1761

**368.** EGDEC: 87286,  
 >IPI:IPI00028276.1|TREMBL:Q9C0B0|REFSEQ\_XP:XP\_036115|ENSEMBL:ENSP00000293218  
 Tax\_Id=9606 Hypothetical protein KIAA1753

**369.** EEDGC: 88108, >IPI:IPI00256910.1|REFSEQ\_XP:XP\_301892 Tax\_Id=9606  
 hypothetical protein XP\_301892

**370.** EEDGC: 88170, >IPI:IPI00335541.1|TREMBL:O94802 Tax\_Id=9606 HTIM1

**371.** GEDEC: 88330, >IPI:IPI00006056.1|SWISS-  
 PROT:P36915|REFSEQ\_NP:NP\_005266|TREMBL:Q96CT5;Q96QB8|ENSEMBL:ENSP00000259886;  
 ENSP00000319707;ENSP00000316778 Tax\_Id=9606 Guanine nucleotide-binding  
 protein-like 1

**372.** GEEDC: 88688, >IPI:IPI00335574.1|ENSEMBL:ENSP00000316092 Tax\_Id=9606

**373.** DCGEE: 88806, >IPI:IPI00257026.1|REFSEQ\_XP:XP\_303108 Tax\_Id=9606  
 hypothetical protein XP\_303108

**374.** GEECD: 89054, >IPI:IPI00000779.1|SWISS-PROT:Q9P0K1-  
 1|REFSEQ\_NP:NP\_068369|TREMBL:Q8IYE7;Q9UKK0;Q86UM2|ENSEMBL:ENSP00000265727  
 Tax\_Id=9606 Splice isoform 1 of Q9P0K1 ADAM 22 precursor

**375.** GEECD: 89060, >IPI:IPI00220631.1|SWISS-PROT:Q9P0K1-  
 2|REFSEQ\_NP:NP\_068368|ENSEMBL:ENSP00000315900 Tax\_Id=9606 Splice isoform 2 of  
 Q9P0K1 ADAM 22 precursor

**376.** GEECD: 89068, >IPI:IPI00220632.1|SWISS-PROT:Q9P0K1-  
 3|REFSEQ\_NP:NP\_004185 Tax\_Id=9606 Splice isoform 3 of Q9P0K1 ADAM 22  
 precursor

**377.** GEECD: 89076, >IPI:IPI00220634.1|SWISS-PROT:Q9P0K1-  
 4|REFSEQ\_NP:NP\_068367 Tax\_Id=9606 Splice isoform 4 of Q9P0K1 ADAM 22  
 precursor

**378.** GEECD: 89080, >IPI:IPI00220635.1|SWISS-PROT:Q9P0K1-  
 5|REFSEQ\_NP:NP\_057435 Tax\_Id=9606 Splice isoform 5 of Q9P0K1 ADAM 22  
 precursor

**379.** EDGE: 89742, >IPI:IPI00027473.1|SWISS-  
 PROT:P08172|REFSEQ\_NP:NP\_000730|TREMBL:Q86SJ1;Q96RH0|ENSEMBL:ENSP00000319984  
 Tax\_Id=9606 Muscarinic acetylcholine receptor M2

**380.** ECEGD: 89816,  
 >IPI:IPI00335591.1|ENSEMBL:ENSP00000330504;ENSP00000332566 Tax\_Id=9606

**381.** DEECG: 90054, >IPI:IPI00016353.1|SWISS-  
 PROT:O94907|REFSEQ\_NP:NP\_036374|ENSEMBL:ENSP00000224974 Tax\_Id=9606 Dickkopf  
 related protein-1 precursor

**382.** EDGCE: 90668, >IPI:IPI00337775.1|REFSEQ\_NP:NP\_877590|TREMBL:Q9BS63  
Tax\_Id=9606 Similar to polyadenylate binding protein-interacting protein 1

**383.** GEECD: 91036,  
>IPI:IPI00337776.1|REFSEQ\_XP:XP\_291251|ENSEMBL:ENSP00000175238 Tax\_Id=9606  
similar to ADAM 7 precursor (A disintegrin and metalloproteinase domain 7)  
(Sperm maturation-related glycoprotein GP-83)

**384.** CEGED: 91690, >IPI:IPI00305390.1|SWISS-PROT:P52789 Tax\_Id=9606  
Hexokinase, type II

**385.** ECGDE: 91888, >IPI:IPI00257749.1|REFSEQ\_XP:XP\_298505 Tax\_Id=9606  
hypothetical protein XP\_298505

**386.** CEGED: 92126,  
>IPI:IPI00182473.2|REFSEQ\_XP:XP\_208296|ENSEMBL:ENSP00000283154;ENSP0000030365  
9 Tax\_Id=9606 similar to RAN-binding protein 2-like 1 isoform 1

**387.** DCEGE: 92126,  
>IPI:IPI00182473.2|REFSEQ\_XP:XP\_208296|ENSEMBL:ENSP00000283154;ENSP0000030365  
9 Tax\_Id=9606 similar to RAN-binding protein 2-like 1 isoform 1

**388.** EGEDC: 92248, >IPI:IPI00257843.1|REFSEQ\_XP:XP\_298576 Tax\_Id=9606  
hypothetical protein XP\_298576

**389.** CEEGD: 92738, >IPI:IPI00186138.1|ENSEMBL:ENSP00000295809 Tax\_Id=9606

**390.** GCEED: 92890,  
>IPI:IPI00021701.1|REFSEQ\_NP:NP\_056031|TREMBL:O43314|ENSEMBL:ENSP00000274387  
Tax\_Id=9606 Hypothetical protein KIAA0433

**391.** ECDEG: 92984,  
>IPI:IPI00258019.1|REFSEQ\_XP:XP\_291378|ENSEMBL:ENSP00000289853 Tax\_Id=9606  
similar to C4b-binding protein alpha chain precursor (C4bp) (Proline-rich  
protein) (PRP)

**392.** ECGED: 93020,  
>IPI:IPI00305608.1|TREMBL:O43339|REFSEQ\_XP:XP\_209111|ENSEMBL:ENSP00000303820  
Tax\_Id=9606 R28830\_1

**393.** ECEGD: 93236,  
>IPI:IPI00335713.1|REFSEQ\_NP:NP\_006759|TREMBL:O43238|ENSEMBL:ENSP00000330813  
Tax\_Id=9606 BRCA1 associated protein

**394.** CEGDE: 94552,  
>IPI:IPI00063121.1|REFSEQ\_NP:NP\_542381|TREMBL:Q96HJ6|ENSEMBL:ENSP00000256538  
Tax\_Id=9606 Similar to RIKEN cDNA 5730421E18 gene

**395.** DGCEE: 94990, >IPI:IPI00106955.1|TREMBL:Q9BUA3 Tax\_Id=9606 Hypothetical  
protein

**396.** CGDEE: 95136, >IPI:IPI00063273.1|SWISS-  
PROT:Q96I34|REFSEQ\_NP:NP\_116291|ENSEMBL:ENSP00000292539 Tax\_Id=9606 Protein  
phosphatase 1 regulatory inhibitor subunit 16A

**397.** DCEGE: 95884, >IPI:IPI00004437.1|TREMBL:Q9BV12|ENSEMBL:ENSP00000312534  
Tax\_Id=9606 Similar to hypothetical protein FLJ20093

**398.** CGEED: 96084,  
 >IPI:IPI00063592.1|REFSEQ\_NP:NP\_543137|TREMBL:Q96RY2;Q8WXK5;Q96IE6;Q86X18|ENS  
 EMBL:ENSP00000303779 Tax\_Id=9606 Similar to RIKEN cDNA 2310012N15 gene

**399.** DEEGC: 96108,  
 >IPI:IPI00063605.1|REFSEQ\_NP:NP\_116265|TREMBL:Q96IF1|ENSEMBL:ENSP00000262713;  
 ENSP00000331606 Tax\_Id=9606 Similar to ajuba

**400.** EGCED: 96108,  
 >IPI:IPI00063605.1|REFSEQ\_NP:NP\_116265|TREMBL:Q96IF1|ENSEMBL:ENSP00000262713;  
 ENSP00000331606 Tax\_Id=9606 Similar to ajuba

**401.** DGCEE: 96196,  
 >IPI:IPI00063633.1|TREMBL:Q96IH0|REFSEQ\_XP:XP\_290508|ENSEMBL:ENSP00000294244  
 Tax\_Id=9606 Hypothetical protein

**402.** GEECD: 96372, >IPI:IPI00031687.1|SWISS-PROT:Q9Y215-  
 1|REFSEQ\_NP:NP\_005668 Tax\_Id=9606 Splice isoform I of Q9Y215  
 Acetylcholinesterase collagenic tail peptide precursor

**403.** GEECD: 96374, >IPI:IPI00220970.1|SWISS-PROT:Q9Y215-  
 2|REFSEQ\_NP:NP\_536799|ENSEMBL:ENSP00000326594 Tax\_Id=9606 Splice isoform II  
 of Q9Y215 Acetylcholinesterase collagenic tail peptide precursor

**404.** GEECD: 96378, >IPI:IPI00220971.1|SWISS-PROT:Q9Y215-3 Tax\_Id=9606 Splice  
 isoform III of Q9Y215 Acetylcholinesterase collagenic tail peptide precursor

**405.** GEECD: 96386, >IPI:IPI00220972.1|SWISS-PROT:Q9Y215-  
 4|REFSEQ\_NP:NP\_536801 Tax\_Id=9606 Splice isoform IV of Q9Y215  
 Acetylcholinesterase collagenic tail peptide precursor

**406.** GDCEE: 96466, >IPI:IPI00258909.1|REFSEQ\_XP:XP\_303547 Tax\_Id=9606  
 hypothetical protein XP\_303547

**407.** GEECD: 96498, >IPI:IPI00306205.1|SWISS-  
 PROT:O43506|REFSEQ\_NP:NP\_003805|ENSEMBL:ENSP00000256389 Tax\_Id=9606 **ADAM** 20  
 precursor

**408.** ECDGE: 96822, >IPI:IPI00335864.1|ENSEMBL:ENSP00000332147 Tax\_Id=9606

**409.** CDGEE: 97348,  
 >IPI:IPI00294137.3|REFSEQ\_NP:NP\_059992|TREMBL:Q99876|ENSEMBL:ENSP00000303634  
 Tax\_Id=9606 apolipoprotein E **receptor** 2 isoform 3 precursor

**410.** GEECD: 97714, >IPI:IPI00259271.1|REFSEQ\_XP:XP\_298879 Tax\_Id=9606  
 hypothetical protein XP\_298879

**411.** DECGE: 98628, >IPI:IPI00064242.1|TREMBL:Q96JP8 Tax\_Id=9606 Fibrillin3

**412.** EDECG: 98628, >IPI:IPI00064242.1|TREMBL:Q96JP8 Tax\_Id=9606 Fibrillin3

**413.** ECGED: 98744, >IPI:IPI00335965.1|ENSEMBL:ENSP00000332244 Tax\_Id=9606

**414.** GEDCE: 99692, >IPI:IPI00027771.1|SWISS-  
 PROT:Q9HA47|REFSEQ\_NP:NP\_113620|ENSEMBL:ENSP00000298508 Tax\_Id=9606 Uridine-  
 cytidine kinase 1

**415.** GEECD: 100172,  
 >IPI:IPI00021903.1|REFSEQ\_NP:NP\_003803|TREMBL:O75077;Q9UKK1|ENSEMBL:ENSP00000264377 Tax\_Id=9606 MDC3

**416.** GEDCE: 100292,  
 >IPI:IPI00306850.1|TREMBL:O75095|REFSEQ\_XP:XP\_031401|ENSEMBL:ENSP00000294599 Tax\_Id=9606 MEGF6

**417.** GEECD: 101716,  
 >IPI:IPI00013569.1|REFSEQ\_NP:NP\_064714|TREMBL:Q9BXP8;Q96PH8;Q9H4C9|ENSEMBL:ENSP00000263529 Tax\_Id=9606 Pregnancy-associated plasma preproprotein-A2

**418.** CGEDE: 102056,  
 >IPI:IPI00307150.1|REFSEQ\_NP:NP\_065801|TREMBL:Q96HN3;Q9HAV4;Q9ULC9;Q9BWM6;Q9H9M4;Q9NT89;Q9NW39;Q96G48;Q9H8N6;Q9BZV5|ENSEMBL:ENSP00000265351 Tax\_Id=9606 Exportin 5

**419.** CEDGE: 102110, >IPI:IPI00012472.1|SWISS-PROT:P31645|REFSEQ\_NP:NP\_001036|TREMBL:Q9NYN7|ENSEMBL:ENSP00000261707 Tax\_Id=9606 **Sodium**-dependent serotonin transporter

**420.** EECGD: 102130, >IPI:IPI00260357.1|REFSEQ\_XP:XP\_305088 Tax\_Id=9606 hypothetical protein XP\_305088

**421.** EEDGC: 102336,  
 >IPI:IPI00307216.1|REFSEQ\_NP:NP\_059125|TREMBL:Q9NVH5;Q9HAY6|ENSEMBL:ENSP00000258168 Tax\_Id=9606 Beta, beta-carotene 15,15'-dioxygenase

**422.** DECEG: 102526, >IPI:IPI00337828.1|TREMBL:Q9BXY3 Tax\_Id=9606 Thrombospondin

**423.** DEEGC: 102716, >IPI:IPI00307298.1|TREMBL:O75197 Tax\_Id=9606 Lipoprotein **receptor** related protein 5

**424.** ECEDG: 102922,  
 >IPI:IPI00336105.1|ENSEMBL:ENSP00000332419;ENSP00000332864 Tax\_Id=9606

**425.** CEDGE: 103100,  
 >IPI:IPI00220106.1|REFSEQ\_NP:NP\_066016|TREMBL:Q9HCD8;Q9BWX0;Q9HBC4|ENSEMBL:ENSP00000304604 Tax\_Id=9606 Membrane-associated guanylate kinase MAGI3

**426.** EDGEC: 103120,  
 >IPI:IPI00307359.1|REFSEQ\_NP:NP\_683707|TREMBL:Q9BRN2;Q8NB17;Q86YQ3|ENSEMBL:ENSP00000325220 Tax\_Id=9606 oxysterol-binding protein-like protein 9 isoform f

**427.** EGEDC: 103162,  
 >IPI:IPI00065186.1|REFSEQ\_NP:NP\_872328|TREMBL:Q96LR4|REFSEQ\_XP:XP\_087261|ENSEMBL:ENSP00000295569 Tax\_Id=9606 Hypothetical protein FLJ25161

**428.** EGECD: 103220, >IPI:IPI00097257.2|SWISS-PROT:Q96M20|REFSEQ\_NP:NP\_543024|ENSEMBL:ENSP00000279046 Tax\_Id=9606 Protein C20orf152

**429.** ECGED: 103328, >IPI:IPI00220045.1|SWISS-PROT:Q9NVU0-1|REFSEQ\_NP:NP\_060589|ENSEMBL:ENSP00000299853 Tax\_Id=9606 Splice isoform 1 of Q9NVU0 DNA-directed RNA polymerases III 80 kDa polypeptide

**430.** ECGDE: 103714, >IPI:IPI00011245.1|SWISS-PROT:Q9HBJ7|REFSEQ\_NP:NP\_065954|ENSEMBL:ENSP00000254181 Tax\_Id=9606 Ubiquitin carboxyl-terminal hydrolase 29

**431.** GEECD: 103878, >IPI:IPI00011224.2|SWISS-PROT:O43184-1|REFSEQ\_NP:NP\_003465|ENSEMBL:ENSP00000278082 Tax\_Id=9606 Splice isoform 12L of O43184 **ADAM** 12 precursor

**432.** ECGDE: 103928, >IPI:IPI00007777.1|SWISS-PROT:Q9UL36-1|TREMBL:O95276|ENSEMBL:ENSP00000253159 Tax\_Id=9606 Splice isoform B of Q9UL36 **Zinc** finger protein 236

**433.** ECGDE: 103930, >IPI:IPI00307551.1|SWISS-PROT:Q9UL36-2|REFSEQ\_NP:NP\_031371|ENSEMBL:ENSP00000322361 Tax\_Id=9606 Splice isoform A of Q9UL36 **Zinc** finger protein 236

**434.** EDEGC: 104252, >IPI:IPI00013162.2|SWISS-PROT:P41217-1 Tax\_Id=9606 Splice isoform 1 of P41217 OX-2 membrane glycoprotein precursor

**435.** EDEGC: 104260, >IPI:IPI00221361.1|SWISS-PROT:P41217-2|REFSEQ\_NP:NP\_005935|ENSEMBL:ENSP00000312766 Tax\_Id=9606 Splice isoform 2 of P41217 OX-2 membrane glycoprotein precursor

**436.** CEDGE: 104728, >IPI:IPI00001152.1|REFSEQ\_NP:NP\_112168|TREMBL:Q9BYT3|ENSEMBL:ENSP00000252710; ENSP00000320754; ENSP00000320933 Tax\_Id=9606 Serine/threonine kinase 33

**437.** EEGDC: 105006, >IPI:IPI00012165.3|SWISS-PROT:Q9HC84|TREMBL:Q93043; Q9NYE4|REFSEQ\_XP:XP\_039854; XP\_039877|ENSEMBL:ENSP0000227189 Tax\_Id=9606 Mucin 5B precursor

**438.** EEC DG: 105502, >IPI:IPI00261059.1|REFSEQ\_XP:XP\_303959 Tax\_Id=9606 hypothetical protein XP\_303959

**439.** EEGDC: 105532, IPI:IPI00021119.1|REFSEQ\_NP:NP\_003645|TREMBL:O43916|ENSEMBL:ENSP00000309270 Tax\_Id=9606 Chondroitin-6-sulfotransferase (Hypothetical protein)