NRCD Human Full-Length cDNA Clone

Gene Engineering Division
RIKEN BioResource Research Center

RIKEN Clone ID : ARe31F06

Lot# : 7672_B6It

Vector : pKA1U5

Gene	IRS2	
RefSeq_mRNA	NM_003749.3	8156 bp

● Plasmid DNA purification

Date : 2026/09/29 Culture : LB (100 ug/ml Ampicillin) 5 ml -> at 37 deg C O/N

Date : 2026/09/30 Purification : QIAGEN Miniprep kit -> dH_2O 100 ul

● Digestion by restriction enzyme/Concentrarion calibration

Date : 2026/09/30

DNA concentration (O.D.): 360 ng/ul

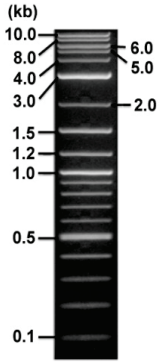
DNA	0.3 ul
Enzyme (BamHI)	1 ul
Buffer H	1 ul
dH_2O	7.7 ul
Total	10 ul

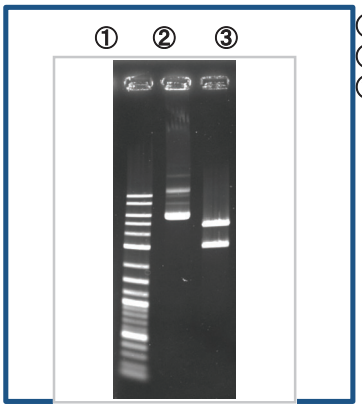
< Size of fragment expected from this clone >

BamHI 3.1kb (vector), 4.8 kb

Erectrophoresis : 1% agarose gel, 1x TAE Buffer

Marker : 2-Log DNA Ladder (NEB#N3200L)





①:Marker
②:uncut
③:BamHI

● Confirmation of the sequence

Date : 2026/10/01

full sequence	ARe31F06hts01.seq

● Adjust plasmid DNA solution to 25 ng/ul

Date : 2026/10/06

DNA (360 ng/ul)	84 ul
10x TE	121 ul
dH_2O	1,005 ul
Total	1,210 ul

● Shipping

☑ Conc. : 25 ng/μl, Volume : 40 μl

☐ Conc. : ___ ng/μl, Volume : ___ μl

APPROVED BY : 検 '26.10.06 笹沼

http://dna.brc.riken.jp/index.html


(7514) BamHI
T3 promoter
SV40 poly(A) signal
ori
1000
AmpR
AmpR promoter
f1 ori
2000
M13 rev
SV40 ori
SV40 promoter
5' terminal sequence
M13 fwd
SV40 intron
T7 promoter
BamHI (2705)
3000
4000
ORF
5000
insert
6000
7000
ARe31F06hts01.seq
7946 bp

BLAST Results

Questions/comments

Blast 2 sequences

Job title: NG_008154:Homo sapiens insulin receptor substrate...

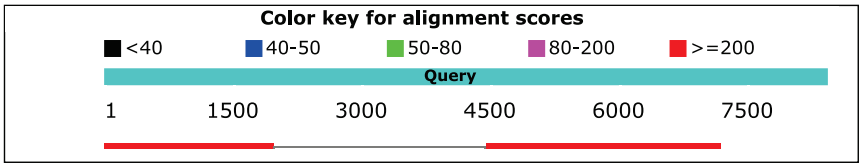
RID BW1KR31B114 (Expires on 10-02 15:06 pm)

Query ID	NM_003749.3	**Subject ID**	lcl|Query_5426341
Description	Homo sapiens insulin receptor substrate 2 (IRS2), mRNA	**Description**	None
Molecule type	nucleic acid		See details
Query Length	8156	**Molecule type**	dna
		Subject Length	7946
		Program	BLASTN 2.17.0+

ARe31F06hts01.seq

Graphic Summary

Distribution of the top 2 Blast Hits on 1 subject sequences



Dot Matrix View

Descriptions

Sequences producing significant alignments:

Description	Max Score	Total Score	Query Cover	E value	Per. Ident	Accession
None provided	4933	8469	56%	0.0	100.00%	Query_5426341

Alignments

Sequence ID: Query_5426341 Length: 7946 Number of Matches: 2
Range 1: 4779 to 7449

Score	Expect	Identities	Gaps	Strand	Frame
4933 bits(2671)	0.0()	2671/2671(100%)	0/2671(0%)	Plus/Plus	

Features:

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CDS:insulin receptor  1272  P  P  P  L  P  Q  P  G  D  K  S  S  W  G  R  T  R  S  L  G
Query                 4344  ccgccgccgcTTCCTCAGCCGGGAGACAAGAGCTCCTGGGGCCGGACCCGAAGCCTCGGG  4403
Sbjct                 4779  ..............................................................  4838

CDS:insulin receptor  1292  G  L  I  S  A  V  G  V  G  S  T  G  G  G  C  G  G  P  G  P
Query                 4404  GGTCTCATCAGCGCTGTGGGCGTCGGCAGCACCGGCGGCGGGTGCGGGGGGCCGGGTCCC  4463
Sbjct                 4839  ..............................................................  4898

CDS:insulin receptor  1312  G  A  L  P  P  A  N  T  Y  A  S  I  D  F  L  S  H  H  L  K
Query                 4464  GGTGCCCTGCCCCCTGCCAACACCTACGCCAGCATTGACTTCTTGTCCCACCACTTGAAG  4523
Sbjct                 4899  ..............................................................  4958

CDS:insulin receptor  1332  E  A  T  I  V  K  E
Query                 4524  GAGGCCACCATCGTGAAAGAGTGAAGATCTGTCTGGCTTTATCACCAGGATGTCACATGT  4583
Sbjct                 4959  ..............................................................  5018

Query                 4584  CAGAGAGTATCATTAAAAGAAGACGCTCAGCACTGTTTCAGCCCGAAGCTGCTTGCAGTT  4643
Sbjct                 5019  ..............................................................  5078

Query                 4644  TTCTTTTGGATCTGAGCAATGACTGTGTTTGGAAACATCTGTGGACTCTGTTAGATGAGG  4703
Sbjct                 5079  ..............................................................  5138
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Query  4704  CACCAACAAGGCAAGGTCACCTGCCTCTTTCCCTTGTTCCCGGATGGGGCATTCATCATT  4763
Sbjct  5139  ............................................................  5198

Query  4764  GTGCtgtttgcgttttgttttgttttgttttAACAAAATTAGCTGAAGAAGTTATTCTCA  4823
Sbjct  5199  ............................................................  5258

Query  4824  AGAAAATTGGATGTTTTCATTGGCCTTCTTAAATTGTGGCCAGTGTCTTTTAATTTCTTC  4883
Sbjct  5259  ............................................................  5318

Query  4884  TTCTTTTCCTTTTGGCAAAGCAGATATAACCCTCAGCATGCTAGGAGAGTGCACCCGTAC  4943
Sbjct  5319  ............................................................  5378

Query  4944  CTATGGAAGTGGTAAAATCTGGTATTTACTGGCTTACACTCAAAACGACCACAGTCCTAC  5003
Sbjct  5379  ............................................................  5438

Query  5004  CTCAGTTCAAGGTAAAGCCGGATTTCCGTGGCGGGGGTCCCACAGGACCTCCTGTAGTAG  5063
Sbjct  5439  ............................................................  5498

Query  5064  CCCCTGCGCTGTGTGTCTGGAGCGCGGTCCTCGGCCTTATTGAAATGGTCCAAGTAGACA  5123
Sbjct  5499  ............................................................  5558

Query  5124  GCTGCTTGTTGGATTCCAGTGCAGGTACCTGCGATGTTTACGTCCACACCGAGCCCAGTG  5183
Sbjct  5559  ............................................................  5618

Query  5184  TGGGACTGACATTTCTCAATGGAAGTGAAATTTGGGATTGGACTTTGAAGACGGATTACT  5243
Sbjct  5619  ............................................................  5678

Query  5244  AAATAATAATTATTATATGTAACTGAAGCAACCTACTTTTGAAAATCAACTGTATTGGGT  5303
Sbjct  5679  ............................................................  5738

Query  5304  AGTGGGAGGTGGGAGGGAAGGGCTTTGGGAAGGGGATGAATATCTCTTTTTACCTTTAAC  5363
Sbjct  5739  ............................................................  5798

Query  5364  AGACTTGTTTAATCTTCTCGATGTAGATGTTTATGTAGGTACTTCACATTGCAAACGCCT  5423
Sbjct  5799  ............................................................  5858

Query  5424  TTTATTCTATTTACAAGCTCAGATGTCTCTGCTCTCCTGAATCTTGGGCATGCCTTTCTG  5483
Sbjct  5859  ............................................................  5918

Query  5484  TAACCAAAAATCCCTGTAGGCGTGCTAGCAATTCCAGGGTGGTCCGGGTTTGGCAGATTT  5543
Sbjct  5919  ............................................................  5978

Query  5544  GATTTTTAAAAAACGTATTATCTTTAATAAAATGTTATTATGTCAACCAGTGAGGCTGCC  5603
Sbjct  5979  ............................................................  6038

Query  5604  CTGAACaaaaaaaacaaaaagaaaaaaaaaaaaggaaagaaagaaactgataaaaagAGG  5663
Sbjct  6039  ............................................................  6098

Query  5664  CATTCCAGCCCCTATGTTATTGATGgaaaaagaaaaagaagaaaagCAATCTCGCAGTAC  5723
Sbjct  6099  ............................................................  6158

Query  5724  ATGTTACTTGTCGAAAAAATTCCGGACAAGACTACCCTTGTTTTATGTTTTCAGTATTCT  5783
Sbjct  6159  ............................................................  6218

Query  5784  GAAAATACCAGTGTGTGGCAGTTCTCGCAGATGTTACCTAAAACTGCTGAACTTGACCGG  5843
Sbjct  6219  ............................................................  6278

Query  5844  CAGAATGTTCTGCCGTTTTCTGCTCCCTCGACACTTGATTGGAGGGCTGTCGACCTCTCC  5903
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Sbjct  6279  ............................................................  6338

Query  5904  TCCCGTGGGGGCTTCCCCAGTGCCTATCTTCTCTGATAGTCATGGAGAGGTTACACTAAT  5963
Sbjct  6339  ............................................................  6398

Query  5964  TCATTGGAGATGTAAgttgttggttttgttttgttttgtttttAGaaaaatatatataaa  6023
Sbjct  6399  ............................................................  6458

Query  6024  tatataatagatatctatcgctatagaataatgcattaataaaatGAGGCTTTTTTAGAG  6083
Sbjct  6459  ............................................................  6518

Query  6084  GAAGACCAAAAAATTCAATGTCTTAAAAATATATTTAATGGCAATGCAAAAGTCTTCCTG  6143
Sbjct  6519  ............................................................  6578

Query  6144  CTTCCGTGCTGAACTTTAGAACAGAGGATTGTATTGCAAGACAAAGTTGAATGTAAAGTG  6203
Sbjct  6579  ............................................................  6638

Query  6204  ATCTCCCTGAACATTTTTAAGGTTTTACTTTTCTGAAATTATACATCACAGCAGTGCATA  6263
Sbjct  6639  ............................................................  6698

Query  6264  GGCCATATAATGTTAGCTGGAAGGTCAATTTCAGTGTATGATATACTTTATTAAGATGTA  6323
Sbjct  6699  ............................................................  6758

Query  6324  TAAAAATCCTGAAGTTTTTATTTAGTTTTGGGAATAGGCATCAATGGGTGGTATTTGCTT  6383
Sbjct  6759  ............................................................  6818

Query  6384  TGTAACTCCCCCCAGGTACGATAGGGACTGAATATGGACCCTGCTGAAAGCAGTGTATTG  6443
Sbjct  6819  ............................................................  6878

Query  6444  ACGCATATTTAACTCGCCCTCTATCCGTAGAGTAGTCATGACACTATACAGATGGTTCGT  6503
Sbjct  6879  ............................................................  6938

Query  6504  GTTCATACTGCAGCTTAAAACAAGCAAAATACACAGATGATAATATGCTAAATTTTCCTC  6563
Sbjct  6939  ............................................................  6998

Query  6564  TATCCTGTACATTTCACAAAAAGGCATATGCAATATTTACATTTTTAATTTAGTTTACAG  6623
Sbjct  6999  ............................................................  7058

Query  6624  AATGGAACCAAAATGTATAAATGTTATGTTTGCTAAAACTTCACAATGTATATTGGGTCT  6683
Sbjct  7059  ............................................................  7118

Query  6684  TTGTACATTTTGCCTGACTTACCTTAAATTTAAAATATTTTTTGCTATATAAACTTTAAC  6743
Sbjct  7119  ............................................................  7178

Query  6744  AGTTATTAAACAGTGTTTTCTTTTTGGGTACGTATTGTTTCTGGATATCAAGATGTTAAA  6803
Sbjct  7179  ............................................................  7238

Query  6804  TATATTTCTTGCTATTGTGATATGACAAGAGACTTAACTTATCTTGCTCTGTCTTCCACT  6863
Sbjct  7239  ............................................................  7298

Query  6864  GTACACGCTGTATATAGGGGTCAATGTGATGCTGCTGGAGACGAGAATAAACTGGACTAG  6923
Sbjct  7299  ............................................................  7358

Query  6924  AATAGTGCATTGTATTTAGTCTGTATTGATCATGGATGCCCTCCTTAATAGCCATATGCA  6983
Sbjct  7359  ............................................................  7418

Query  6984  ATAAAATAAAGTACATTATTTATGAAATGAA  7014
Sbjct  7419  ...............................  7449
```

Range 2: 2875 to 4788

Score	Expect	Identities	Gaps	Strand	Frame
3535 bits(1914)	0.0()	1914/1914(100%)	0/1914(0%)	Plus/Plus	

Features:

```
Query                  4     ACTCACTGTGCGGCGGGGACCGCGACGAGCCCGGGTCGCCGTTGgcagcagcagcagcaa  63
Sbjct                  2875  ............................................................  2934

Query                  64    caccagcagcagcagccccggcggcggcgcggaccccgagcgcccgggcgcaccccg  123
Sbjct                  2935  ............................................................  2994

Query                  124   gcttcccggagcgcgacgcggcggcAGCAGCCCCGGTGCGGCCGCGCGCGCCTTAGGCTC  183
Sbjct                  2995  ............................................................  3054

Query                  184   GGCCCCGCGGCTCGGGGACCCCGACTCCCGGCCCAGCGAGCGCGTCCCCCGGCGCCGCCC  243
Sbjct                  3055  ............................................................  3114

Query                  244   GAGAGCCCGAGGAGGCAGCGGCCGCAGGCAGCCGGGGAGGGGGGCGGCCACCGCCCGCGC  303
Sbjct                  3115  ............................................................  3174

Query                  304   CGGGCATCCTCAGGAGCCCCAGAGCGCGGAGGGCGCGGCGCCGCCGAGCGGTGCTGGCCC  363
Sbjct                  3175  ............................................................  3234

Query                  364   CCGCGGGCCTCCCCGGACCTTCCCCACCGCCTGGGCCCGAGGGACGCGTGATCGGGCGGG  423
Sbjct                  3235  ............................................................  3294

Query                  424   CGGCCGGGCGCAAGGGTGGGAGGGAgccgccccgcccgcgccccctccgcccctcgccc  483
Sbjct                  3295  ............................................................  3354

CDS:insulin receptor   1                                                     M  A  S  P
Query                  484   caacccctgggcgccgggcccgggccgcgcggcctgaagcgcccgcgatggcgagcccgc  543
Sbjct                  3355  ............................................................  3414

CDS:insulin receptor   5     P  R  H  G  P  P  G  P  A  S  G  D  G  P  N  L  N  N  N  N
Query                  544   cgcggcacgggccgcccgggccggcgAGCGGAGACGGCCCCAACCTcaacaacaacaaca  603
Sbjct                  3415  ............................................................  3474

CDS:insulin receptor   25    N  N  N  N  H  S  V  R  K  C  G  Y  L  R  K  Q  K  H  G  H
Query                  604   acaacaacaacCACAGCGTGCGCAAGTGCGGCTACCTGCGCAAGCAGAAGCATGGCCACA  663
Sbjct                  3475  ............................................................  3534

CDS:insulin receptor   45    K  R  F  F  V  L  R  G  P  G  A  G  G  D  E  A  T  A  G  G
Query                  664   AGCGCTTCTTCGTGCTgcgcggacccggcgcgggcggcgacgaggcgacggcgggcgggg  723
Sbjct                  3535  ............................................................  3594

CDS:insulin receptor   65    G  S  A  P  Q  P  P  R  L  E  Y  Y  E  S  E  K  K  W  R  S
Query                  724   ggtcggcgccgcaaccgccgcggcTCGAGTACTACGAGAGCGAGAAAAAGTGGCGGAGCA  783
Sbjct                  3595  ............................................................  3654

CDS:insulin receptor   85    K  A  G  A  P  K  R  V  I  A  L  D  C  C  L  N  I  N  K  R
Query                  784   AGGCAGGCGCGCCGAAACGGGTGATCGCTCTCGACTGCTGCCTGAACATCAACAAGCGCG  843
Sbjct                  3655  ............................................................  3714
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CDS:insulin receptor   105   A  D  A  K  H  K  Y  L  I  A  L  Y  T  K  D  E  Y  F  A  V
Query                  844   CCGACGCCAAGCACAAGTACCTGATCGCCCTCTACACCAAGGACGAGTACTTCGCCGTGG  903
Sbjct                  3715  ............................................................  3774

CDS:insulin receptor   125   A  A  E  N  E  Q  E  Q  E  G  W  Y  R  A  L  T  D  L  V  S
Query                  904   CCGCCGAGAACGAGCAGGAGCAGGAGGGCTGGTACCGCGCGCTCACCGACCTGGTCAGCG  963
Sbjct                  3775  ............................................................  3834

CDS:insulin receptor   145   E  G  R  A  A  A  G  D  A  P  P  A  A  A  P  A  A  S  C  S
Query                  964   AGGgccgcgcggccgccggagacgcgccccccgccgccgcgcccgccgcgtcctgcagcg  1023
Sbjct                  3835  ............................................................  3894

CDS:insulin receptor   165   A  S  L  P  G  A  L  G  G  S  A  G  A  A  G  A  E  D  S  Y
Query                  1024  cctccctgcccggcgccctGGGCGGCTCTGCCGGCGCCGCCGGGGCCGAGGACAGCTACG  1083
Sbjct                  3895  ............................................................  3954

CDS:insulin receptor   185   G  L  V  A  P  A  T  A  A  Y  R  E  V  W  Q  V  N  L  K  P
Query                  1084  GGCTGGTGGCTCCCGCCACGGCCGCCTACCGTGAGGTGTGGCAGGTGAACCTGAAGCCCA  1143
Sbjct                  3955  ............................................................  4014

CDS:insulin receptor   205   K  G  L  G  Q  S  K  N  L  T  G  V  Y  R  L  C  L  S  A  R
Query                  1144  AGGGTCTGGGCCAGAGCAAGAACCTGACGGGGGTGTACCGTCTGTGCCTGTCTGCGCGCA  1203
Sbjct                  4015  ............................................................  4074

CDS:insulin receptor   225   T  I  G  F  V  K  L  N  C  E  Q  P  S  V  T  L  Q  L  M  N
Query                  1204  CCATCGGCTTCGTGAAGCTCAACTGCGAGCAGCCGTCGGTGACGCTGCAGCTCATGAACA  1263
Sbjct                  4075  ............................................................  4134

CDS:insulin receptor   245   I  R  R  C  G  H  S  D  S  F  F  F  I  E  V  G  R  S  A  V
Query                  1264  TCCGCCGCTGCGGCCACTCGGACAGCTTCTTCTTCATCGAGGTGGGCCGCTCGGCCGTCA  1323
Sbjct                  4135  ............................................................  4194

CDS:insulin receptor   265   T  G  P  G  E  L  W  M  Q  A  D  D  S  V  V  A  Q  N  I  H
Query                  1324  CAGGCCCCGGCGAGCTGTGGATGCAGGCGGACGACTCGGTGGTGGCGCAGAACATCCACG  1383
Sbjct                  4195  ............................................................  4254

CDS:insulin receptor   285   E  T  I  L  E  A  M  K  A  L  K  E  L  F  E  F  R  P  R  S
Query                  1384  AGACCATCCTGGAGGCCATGAAGGCGCTCAAGGAGCTCTTCGAGTTCCGGCCGCGCAGTA  1443
Sbjct                  4255  ............................................................  4314

CDS:insulin receptor   305   K  S  Q  S  S  G  S  S  A  T  H  P  I  S  V  P  G  A  R  R
Query                  1444  AGAGCCAATCGTCGGGGTCGTCGGCCACGCACCCCATCAGCGTCCCCGGCGCGCGCCGCC  1503
Sbjct                  4315  ............................................................  4374

CDS:insulin receptor   325   H  H  H  L  V  N  L  P  P  S  Q  T  G  L  V  R  R  S  R  T
Query                  1504  ACCACCACCTGGTCAACCTGCCCCCCAGCCAGACGGGCCTGGTGCGCCGCTCGCGCACCG  1563
Sbjct                  4375  ............................................................  4434

CDS:insulin receptor   345   D  S  L  A  A  T  P  P  A  A  K  C  S  S  C  R  V  R  T  A
Query                  1564  ACAGCCTGGCCGCCACCCCGCCGGCGGCCAAGTGCAGCTCGTGCCGGGTGCGCACCGCCA  1623
Sbjct                  4435  ............................................................  4494

CDS:insulin receptor   365   S  E  G  D  G  G  A  A  A  G  A  A  A  A  G  A  R  P  V  S
Query                  1624  gcgagggcgacggcggcgcggcggcgggagcggcggccgcgggcgCCAGGCCGGTGTCGG  1683
Sbjct                  4495  ............................................................  4554

CDS:insulin receptor   385   V  A  G  S  P  L  S  P  G  P  V  R  A  P  L  S  R  S  H  T
Query                  1684  TGGCTGGGAGCCCCCTGAGCCCCGGGCCGGTGCGCGCGCCCCTGAGCCGCTCGCACACCC  1743
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Sbjct              4555  ..................................................  4614

CDS:insulin receptor  405  L  S  G  G  C  G  G  R  G  S  K  V  A  L  L  P  A  G  G  A
Query              1744  TGAGCGGCGGCTGCGGCGGCCGCGGGAGCAAGGTGGCGCTGCTGCCGGCAGGGGGCGCGC  1803
Sbjct              4615  ..................................................  4674

CDS:insulin receptor  425  L  Q  H  S  R  S  M  S  M  P  V  A  H  S  P  P  A  A  T  S
Query              1804  TGCAACACAGCCGCTCCATGTCCATGCCCGTGGCGCACTCGCCGCCCGCCGCCACCAGCC  1863
Sbjct              4675  ..................................................  4734

CDS:insulin receptor  445  P  G  S  L  S  S  S  S  G  H  G  S  G  S  Y  P  P  P
Query              1864  CCGGCTCCCTGTCGTCCAGCAGCGGCCACGGCTCGGGCTCCTAcccgccgccgc  1917
Sbjct              4735  ..................................................  4788
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