NRCD Human Full-Length cDNA Clone

Gene Engineering Division
RIKEN BioResource Research Center

## RIKEN Clone ID : RBdS014N07

Lot# : 6608_B5An

Vector : pGCAP10

| Gene | RYK | |
|---|---|---|
| RefSeq_mRNA | NM_002958.4 | 3049 bp |

### ● Plasmid DNA purification

Date : 2025/01/23 Culture : LB (100 ug/ml Ampicillin) 5 ml -> at 37 deg C O/N

Date : 2025/01/24 Purification : QIAGEN Miniprep kit -> $dH_2O$ 100 ul

### ● Digestion by restriction enzyme/Concentrarion calibration

Date : 2025/01/24

DNA concentration (O.D.): 391 ng/ul

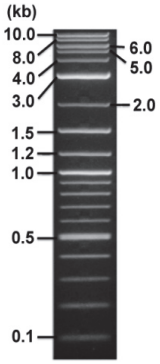
< Size of fragment expected from this clone >

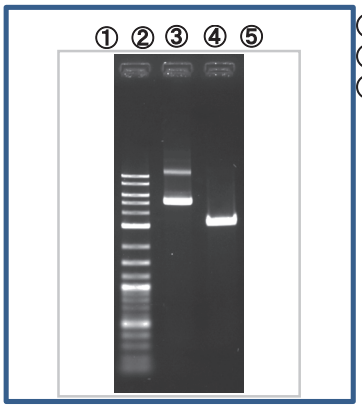
| | |
|---|---|
| DNA | 0.25 ul |
| Enzyme (BamHI ) | 1 ul |
| Buffer H | 1 ul |
| $dH_2O$ | 7.75 ul |
| Total | 10 ul |

BamHI 3.1kb (vector), 3.3 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 : 2025/01/28

| full sequence | RBdS014N07hts01.seq |
|---|---|
| | |
| | |
| | |

### ● Adjust plasmid DNA solution to 25 ng/ul

Date : 2025/01/29

| | |
|---|---|
| DNA ( 391 ng/ul) | 82 ul |
| 10x TE | 128 ul |
| $dH_2O$ | 1,072 ul |
| Total | 1,282 ul |

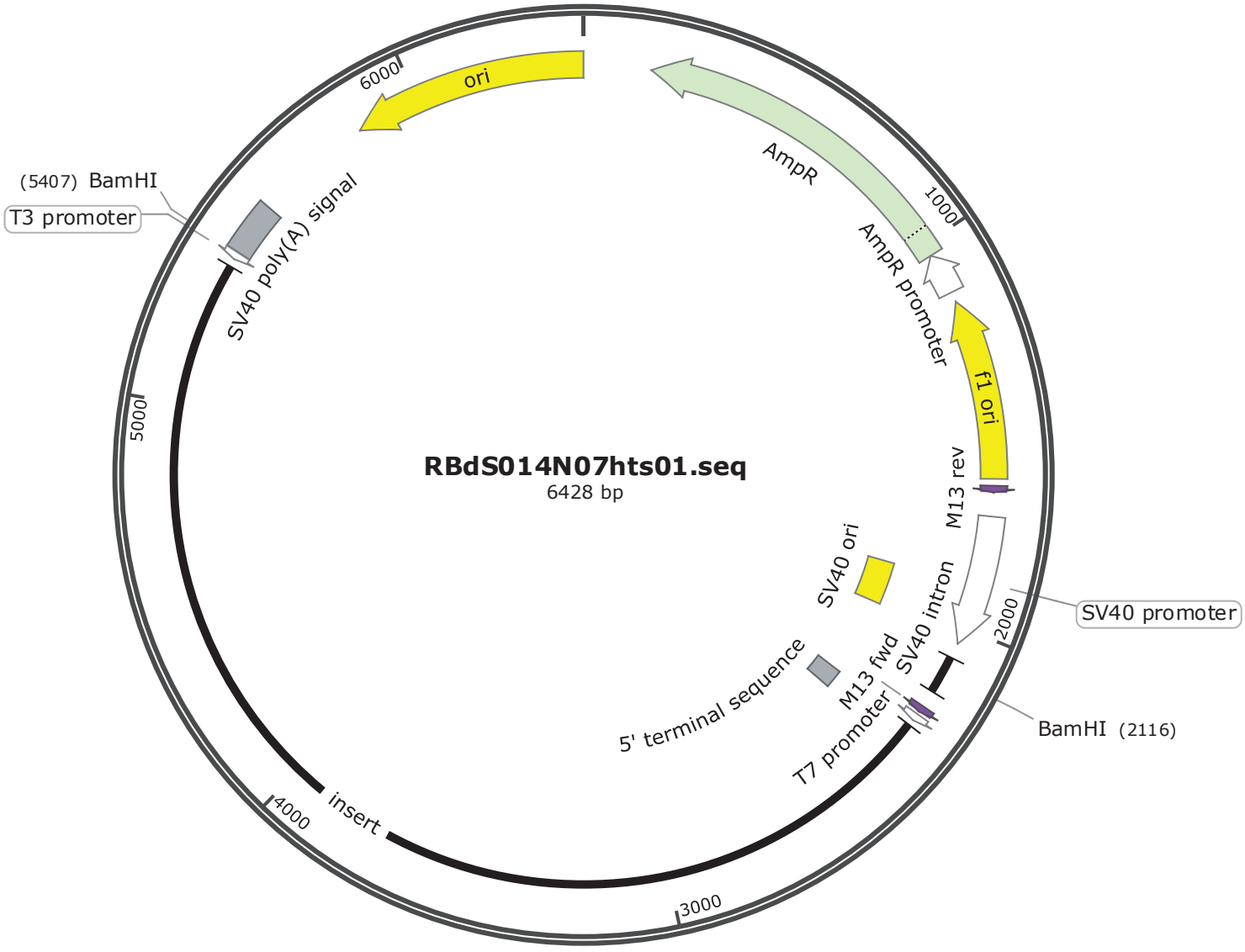
### ● Shipping

☑ Conc. : 25 ng/μl, Volume : 40 μl

☐ Conc. : __ ng/μl, Volume : __ μl

APPROVED BY : 検 '25.01.29 笹沼

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


RBdS014N07hts01.seq
6428 bp
6000
ori
AmpR
1000
AmpR promoter
f1 ori
M13 rev
SV40 intron
2000
SV40 promoter
BamHI (2116)
M13 fwd
T7 promoter
5' terminal sequence
SV40 ori
3000
insert
4000
5000
SV40 poly(A) signal
(5407) BamHI
T3 promoter

**BLAST Results**

Questions/comments

**Blast 2 sequences**

**Job title: NM_001005861:Homo sapiens receptor like tyrosine...**

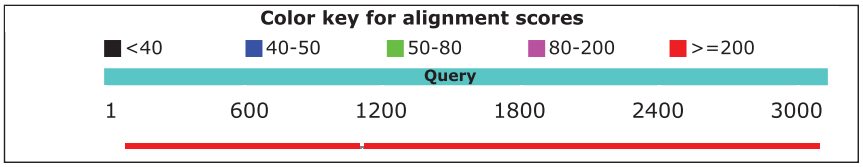
**RID** TH1GJ34B114 (Expires on 01-29 14:24 pm)

| | | | |
|---|---|---|---|
| **Query ID** | NM_001005861.3 | **Subject ID** | lcl\|Query_46971 |
| **Description** | Homo sapiens receptor like tyrosine kinase (RYK), transcript variant 1, mRNA | **Description** | None<br>See details |
| **Molecule type** | nucleic acid | **Molecule type** | dna |
| **Query Length** | 3058 | **Subject Length** | 6428 |
| | | **Program** | BLASTN 2.16.1+ |

RBdS014N07hts01.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 | 3609 | 5466 | 97% | 0.0 | 99.95% | Query_46971 |

## Alignments

Sequence ID: Query_46971 Length: 6428 Number of Matches: 2
Range 1: 3386 to 5342

| Score | Expect | Identities | Gaps | Strand | Frame |
|---|---|---|---|---|---|
| 3609 bits(1954) | 0.0() | 1956/1957(99%) | 0/1957(0%) | Plus/Plus | |

Features:

```
CDS:tyrosine-protein  300    G  Y  P  T  L  R  I  E  K  N  D  L  R  S  V  T  L  L  E  A
Query                 1102   AGGTTATCCTACCTTGCGGATAGAGAAGAACGACTTGAGAAGTGTCACTCTTTTGGAGGC  1161
Sbjct                 3386   ............................................................  3445

CDS:tyrosine-protein  320    K  G  K  V  K  D  I  A  I  S  R  E  R  I  T  L  K  D  V  L
Query                 1162   CAAAGGCAAGGTGAAGGATATAGCAATATCCAGAGAGAGGATAACTCTAAAAGATGTACT  1221
Sbjct                 3446   ............................................................  3505

CDS:tyrosine-protein  340    Q  E  G  T  F  G  R  I  F  H  G  I  L  I  D  E  K  D  P  N
Query                 1222   CCAAGAAGGTACTTTTGGGCGTATTTTCCATGGGATTTTAATAGATGAAAAAGATCCAAA  1281
Sbjct                 3506   ............................................................  3565

CDS:tyrosine-protein  360    K  E  K  Q  A  F  V  K  T  V  K  D  Q  A  S  E  I  Q  V  T
Query                 1282   TAAAGAAAAACAAGCATTTGTCAAAACAGTTAAAGATCAAGCTTCTGAAATTCAGGTGAC  1341
Sbjct                 3566   ............................................................  3625

CDS:tyrosine-protein  380    M  M  L  T  E  S  C  K  L  R  G  L  H  H  R  N  L  L  P  I
Query                 1342   AATGATGCTCACTGAAAGTTGTAAGCTGCGAGGTCTTCATCACAGAAATCTTCTTCCTAT  1401
Sbjct                 3626   ............................................................  3685

CDS:tyrosine-protein  400    T  H  V  C  I  E  E  G  E  K  P  M  V  I  L  P  Y  M  N  W
Query                 1402   TACTCATGTGTGTATAGAAGAAGGAGAAAAGCCCATGGTGATATTGCCTTACATGAATTG  1461
Sbjct                 3686   ............................................................  3745
```

```
CDS:tyrosine-protein  420    G  N  L  K  L  F  L  R  Q  C  K  L  V  E  A  N  N  P  Q  A
Query                 1462   GGGGAATCTTAAATTGTTTTTACGACAGTGCAAGTTAGTAGAGGCCAATAATCCACAGGC  1521
Sbjct                 3746   ............................................................  3805

CDS:tyrosine-protein  440    I  S  Q  Q  D  L  V  H  M  A  I  Q  I  A  C  G  M  S  Y  L
Query                 1522   AATTTCTCAGCAAGACCTGGTACACATGGCTATTCAGATTGCCTGTGGAATGAGCTACCT  1581
Sbjct                 3806   ............................................................  3865

CDS:tyrosine-protein  460    A  R  R  E  V  I  H  K  D  L  A  A  R  N  C  V  I  D  D  T
Query                 1582   GGCCAGAAGGGAAGTCATCCACAAAGACCTGGCTGCCAGGAACTGTGTCATTGATGACAC  1641
Sbjct                 3866   ............................................................  3925

CDS:tyrosine-protein  480    L  Q  V  K  I  T  D  N  A  L  S  R  D  L  F  P  M  D  Y  H
Query                 1642   ACTTCAAGTTAAGATCACAGACAATGCCCTCTCCAGAGACTTGTTCCCCATGGACTATCA  1701
Sbjct                 3926   ............................................................  3985

CDS:tyrosine-protein  500    C  L  G  D  N  E  N  R  P  V  R  W  M  A  L  E  S  L  V  N
Query                 1702   CTGTCTGGGGGACAATGAAAACAGGCCAGTTCGTTGGATGGCTCTTGAAAGTCTGGTTAA  1761
Sbjct                 3986   ............................................................  4045

CDS:tyrosine-protein  520    N  E  F  S  S  A  S  D  V  W  A  F  G  V  T  L  W  E  L  M
Query                 1762   TAACGAGTTCTCTAGCGCTAGTGATGTGTGGGCCTTTGGAGTGACGCTGTGGGAACTCAT  1821
Sbjct                 4046   ............................................................  4105

CDS:tyrosine-protein  540    T  L  G  Q  T  P  Y  V  D  I  D  P  F  E  M  A  A  Y  L  K
Query                 1822   GACTCTGGGCCAGACTCCCTACGTGGACATTGACCCCTTCGAGATGGCCGCATACCTGAA  1881
Sbjct                 4106   ............................................................  4165

CDS:tyrosine-protein  560    D  G  Y  R  I  A  Q  P  I  N  C  P  D  E  L  F  A  V  M  A
Query                 1882   AGATGGTTACCGAATAGCCCAGCCAATCAACTGTCCTGATGAATTATTTGCTGTGATGGC  1941
Sbjct                 4166   ............................................................  4225

CDS:tyrosine-protein  580    C  C  W  A  L  D  P  E  E  R  P  K  F  Q  Q  L  V  Q  C  L
Query                 1942   CTGTTGCTGGGCCTTAGATCCAGAGGAGAGGCCCAAGTTTCAGCAGCTGGTACAGTGCCT  2001
Sbjct                 4226   ............................................................  4285

CDS:tyrosine-protein  600    T  E  F  H  A  A  L  G  A  Y  V
Query                 2002   AACAGAGTTTCATGCAGCCCTGGGGGCCTACGTCTGACTCCTCTCCAATCCCACACCATC  2061
Sbjct                 4286   ............................................................  4345

Query                 2062   AGGAAGAAGGTGCCTGTCGGGGCTCACTTGAAGCCTGTCAGGGATGCTTTGTATCTAACA  2121
Sbjct                 4346   ............................................................  4405

Query                 2122   CAACGCCAACAGAAGCACATTTGTCTTCCAGAACACCGTGCCTTAGAAATGCTTTAGAAT  2181
Sbjct                 4406   ............................................................  4465

Query                 2182   CTGAACTTTTTAAGACAGACTTAATAATGTGGCATATTTTCTAGATATCACTTTTATTAG  2241
Sbjct                 4466   ............................................................  4525

Query                 2242   GTTGAACTGAAAGGGttttttgtaaatttttttggccaaaatttttttAAAACATACTTACTT  2301
Sbjct                 4526   ............................................................  4585

Query                 2302   TGGACTAGGGGTACATTCTTACAAAATAAATAAACAGTTTTTAAAATTGTTTAGACACAG  2361
Sbjct                 4586   ............................................................  4645

Query                 2362   ATATTTGGAATTAGCTATCTTAGTGCCAACTGCttttttatttttttACTTCATCAAGGTG  2421
Sbjct                 4646   ............................................................  4705
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```
Query                 2422   ATGTAAGTGACTCACCTTTAAAGttttttttAGTGTTATTTTTTATCACTACTCTGGGAAA  2481
Sbjct                 4706   ............................................................  4765

Query                 2482   TGGTTTGTCTTCAAGATGCAATACTTTTCTTAGTAAAGGAAAAACAGCATAAAAAGATAC  2541
Sbjct                 4766   ............................................................  4825

Query                 2542   CTGGTCTGCCTTGTACAAGAAAAGGCAATATTAGAGGAAGAAAATTTAAAGAAAAGCTAG  2601
Sbjct                 4826   ............................................................  4885

Query                 2602   AGGaaaaaaaaattttttttAAAAATACTTATTAGAAGCAAACTGCCCTTGCATGGAAAAC  2661
Sbjct                 4886   ..................A.........................................  4945

Query                 2662   TGTTTAttttttttCAGTGAAAAGGAATTCTGCTTTCGTGTTTTTGGGAAAGCAGGAACTG  2721
Sbjct                 4946   ............................................................  5005

Query                 2722   AGTTCATTACATCTTTAATTTGGCAGAAATTAGCCTTTCTGTGAACCAGATGTGGTTTGG  2781
Sbjct                 5006   ............................................................  5065

Query                 2782   GGCAGATCTGTAGTAAACAATGGTGATTTTATTTATTTTTACTCTCTGGAAAAGGAGATA  2841
Sbjct                 5066   ............................................................  5125

Query                 2842   ATACAATTCCAGAAAGTGAACTCATATTTCTAAGGTTAAGATTCCCTTTTATTGCACCTA  2901
Sbjct                 5126   ............................................................  5185

Query                 2902   GAATAGTGCTATGCACAGAGCGGGTGCTTGAGTTGTTGTCGttttttgtttgtttttttAA  2961
Sbjct                 5186   ............................................................  5245

Query                 2962   ATGTAAACTGGTAAATTTTGTGCTTATCTTCAAGGCTGGCTTAAGTATAAAATTGTTTTT  3021
Sbjct                 5246   ............................................................  5305

Query                 3022   TAAACACTTGAAAAATTAAAGGATTTGTTTTATATTA  3058
Sbjct                 5306   ....................................  5342
```

Range 2: 2279 to 3283

| Score | Expect | Identities | Gaps | Strand | Frame |
|---|---|---|---|---|---|
| 1857 bits(1005) | 0.0() | 1005/1005(100%) | 0/1005(0%) | Plus/Plus | |

Features:

```
Query                 90     GGTGCGATGAGCTGGGCAGCCGCCCCcggctcggggctgtgagcggctcggggccggggg  149
Sbjct                 2279   ............................................................  2338

CDS:tyrosine-protein  1                                                          M
Query                 150    tgggcggcggtgcggcgggcggccgacgctcctcttcggcggcggcggcggcggccatgc  209
Sbjct                 2339   ............................................................  2398

CDS:tyrosine-protein  2      R  G  A  A  R  L  G  R  P  G  R  S  C  L  P  G  A  R  G  L
Query                 210    gtggggcggcgcggctggggcggccgggccggagttgcctcccgggggcccgcggcctga  269
Sbjct                 2399   ............................................................  2458

CDS:tyrosine-protein  22     R  A  P  P  P  P  P  L  L  L  L  L  A  L  L  P  L  L  P  A
Query                 270    gggccccgccgccgccgccgctgctgcttctgcttgcgctgttgccgctgctgcccgcgc  329
Sbjct                 2459   ............................................................  2518

CDS:tyrosine-protein  42     P  G  A  A  A  A  P  A  P  R  P  P  P  E  L  Q  S  A  S  A  G
Query                 330    ctggcgctgccgccgcccccgccccgcgcggccccccgGAGCTGCAGTCGGCTTCCGCGGGGC  389
```

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Sbjct          2519  ..................................................  2578

CDS:tyrosine-protein  62   P  S  V  S  L  Y  L  S  E  D  E  V  R  R  L  I  G  L  D  A
Query          390   CCAGCGTGAGTCTCTACCTGAGCGAGGACGAGGTGCGCCGGCTGATCGGTCTTGATGCAG  449
Sbjct          2579  ..................................................  2638

CDS:tyrosine-protein  82   E  L  Y  Y  V  R  N  D  L  I  S  H  Y  A  L  S  F  S  L  L
Query          450   AACTTTATTATGTGAGAAATGACCTTATTAGTCACTACGCTCTATCCTTTAGTCTGTTAG  509
Sbjct          2639  ..................................................  2698

CDS:tyrosine-protein  102  V  P  S  E  T  N  F  L  H  F  T  W  H  A  K  S  K  V  E  Y
Query          510   TACCCAGTGAGACAAATTTCCTGCACTTCACCTGGCATGCGAAGTCCAAGGTTGAATATA  569
Sbjct          2699  ..................................................  2758

CDS:tyrosine-protein  122  K  L  G  F  Q  V  D  N  V  L  A  M  D  M  P  Q  V  N  I  S
Query          570   AGCTGGGATTCCAAGTGGACAATGTTTTGGCAATGGATATGCCCCAGGTCAACATTTCTG  629
Sbjct          2759  ..................................................  2818

CDS:tyrosine-protein  142  V  Q  G  E  V  P  R  T  L  S  V  F  R  V  E  L  S  C  T  G
Query          630   TTCAGGGGGAAGTTCCACGCACTTTATCAGTGTTTCGGGTAGAGCTTTCCTGTACTGGCA  689
Sbjct          2819  ..................................................  2878

CDS:tyrosine-protein  162  K  V  D  S  E  V  M  I  L  M  Q  L  N  L  T  V  N  S  S  K
Query          690   AAGTAGATTCTGAAGTTATGATACTAATGCAGCTCAACTTGACAGTAAATTCTTCAAAAA  749
Sbjct          2879  ..................................................  2938

CDS:tyrosine-protein  182  N  F  T  V  L  N  F  K  R  R  K  M  C  Y  K  K  L  E  E  V
Query          750   ATTTTACCGTCTTAAATTTTAAACGAAGGAAAATGTGCTACAAAAAACTTGAAGAAGTAA  809
Sbjct          2939  ..................................................  2998

CDS:tyrosine-protein  202  K  T  S  A  L  D  K  N  T  S  R  T  I  Y  D  P  V  H  A  A
Query          810   AAACTTCAGCCTTGGACAAAAACACTAGCAGAACTATTTATGATCCTGTACATGCAGCTC  869
Sbjct          2999  ..................................................  3058

CDS:tyrosine-protein  222  P  T  T  S  T  R  V  F  Y  I  S  V  G  V  C  C  A  V  I  F
Query          870   CAACCACTTCTACGCGTGTGTTTTATATTAGTGTAGGGGTTTGTTGTGCAGTAATATTTC  929
Sbjct          3059  ..................................................  3118

CDS:tyrosine-protein  242  L  V  A  I  I  L  A  V  L  H  L  H  S  M  K  R  I  E  L  D
Query          930   TCGTAGCAATAATATTAGCTGTTTTGCACCTTCATAGTATGAAAAGGATTGAACTGGATG  989
Sbjct          3119  ..................................................  3178

CDS:tyrosine-protein  262  D  S  I  S  A  S  S  S  S  Q  G  L  S  Q  P  S  T  Q  T  T
Query          990   ACAGCATTAGTGCCAGCAGTAGTTCCCAAGGGCTGTCTCAGCCATCCACCCAGACGACTC  1049
Sbjct          3179  ..................................................  3238

CDS:tyrosine-protein  282  Q  Y  L  R  A  D  T  P  N  N  A  T  P  I  T
Query          1050  AGTATCTGAGAGCAGACACGCCCAACAATGCAACTCCTATCACCA  1094
Sbjct          3239  ..............................................  3283
```

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