NRCD Human Full-Length cDNA Clone

Gene Engineering Division
RIKEN BioResource Research Center

RIKEN Clone ID : RBd82A11

Lot# : 7677_B5Js

Vector : pGCAP10

Gene	GNPAT	
RefSeq_mRNA	NM_014236.4	2641 bp

● Plasmid DNA purification

Date : 2026/10/27 Culture : LB (100 ug/ml Ampicillin) 5 ml -> at 37 deg C O/N

Date : 2026/10/28 Purification : QIAGEN Miniprep kit -> dH_2O 100 ul

● Digestion by restriction enzyme/Concentrarion calibration

Date : 2026/10/28

DNA concentration (O.D.): 297 ng/ul

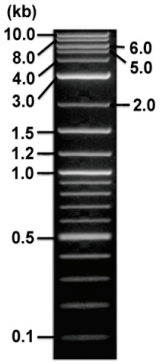
< Size of fragment expected from this clone >

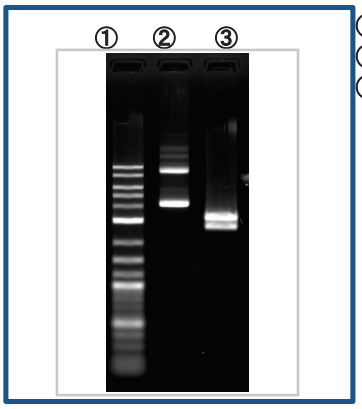
DNA	0.35	ul
Enzyme (BamHI)	1	ul
Buffer H	1	ul
dH_2O	7.65	ul
Total	10	ul

BamHI 3.1kb (vector), 2.6 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 : 2026/10/29

full sequence	RBd82A11hts01.seq

● Adjust plasmid DNA solution to 25 ng/ul

Date : 2026/10/30

DNA (297 ng/ul)	84	ul
10x TE	100	ul
dH_2O	814	ul
Total	998	ul

● Shipping

☑ Conc. : 25 ng/μl, Volume : 40 μl

☐ Conc. : __ ng/μl, Volume : __ μl

APPROVED BY : 検 '26.10.30 笹沼

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


(5313) BamHI
T3 promoter
SV40 poly(A) signal
ori
5000
1000
AmpR
AmpR promoter
sig...
f1 ori
2000
M13 rev
SV40 promoter
SV40 ori
SV40 intron
M13 fwd
T7 promoter
5' terminal sequence
ORF
insert
4000
3000
BamHI (2705)
RBd82A11hts01.seq
5745 bp

BLAST Results

Questions/comments

Blast 2 sequences

Job title: BC047409:Homo sapiens karyopherin alpha 5...

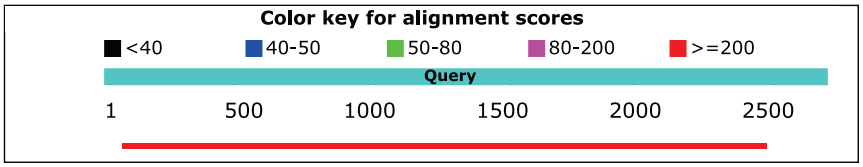
RID E5Z7MKBS114 (Expires on 10-30 15:59 pm)

Query ID	NM_014236.4	**Subject ID**	lcl|Query_6243465
Description	Homo sapiens glyceronephosphate O-acyltransferase (GNPAT), transcript variant 1, mRNA	**Description**	None See details
Molecule type	nucleic acid	**Molecule type**	dna
Query Length	2641	**Subject Length**	5745
		Program	BLASTN 2.17.0+

RBd82A11hts01.seq

Graphic Summary

Distribution of the top 1 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	4403	4403	91%	0.0	99.83%	Query_6243465

Alignments

Sequence ID: Query_6243465 Length: 5745 Number of Matches: 1
Range 1: 2862 to 5257

Score	Expect	Identities	Gaps	Strand	Frame
4403 bits(2384)	0.0()	2392/2396(99%)	0/2396(0%)	Plus/Plus	

Features:

```
Query          70    GAAGTAGGGCCGTCCTGAGCGAAAGAACCGCCCCCAGCAGGAGCACCACCACGGCTTAGC  129
Sbjct          2862  ...T.G.....................................................T.....  2921

CDS:dihydroxyacetone  1                                                  M  E  S  S  S  S  S
Query          130   AAAGAATCCCAGACCCCGCCCGGGAAGGCAGCCGCACCATGGAGTCTTCCAGTTCATCTA  189
Sbjct          2922  ............................................................  2981

CDS:dihydroxyacetone  8     N  S  Y  F  S  V  G  P  T  S  P  S  A  V  V  L  L  Y  S  K
Query          190   ACTCTTATTTCTCCGTTGGCCCAACCAGTCCCAGCGCTGTCGTGCTCCTCTACTCGAAGG  249
Sbjct          2982  ............................................................  3041

CDS:dihydroxyacetone  28    E  L  K  K  W  D  E  F  E  D  I  L  E  E  R  R  H  V  S  D
Query          250   AGCTCAAAAAGTGGGATGAGTTTGAAGATATTTTAGAAGAGAGGAGGCATGTCAGTGACT  309
Sbjct          3042  ............................................................  3101

CDS:dihydroxyacetone  48    L  K  F  A  M  K  C  Y  T  P  L  V  Y  K  G  I  T  P  C  K
Query          310   TGAAATTTGCAATGAAATGCTACACACCTCTTGTCTATAAGGGAATTACTCCATGTAAAC  369
Sbjct          3102  ............................................................  3161

CDS:dihydroxyacetone  68    P  I  D  I  K  C  S  V  L  N  S  E  E  I  H  Y  V  I  K  Q
Query          370   CAATTGATATTAAATGTAGTGTTCTCAATTCTGAGGAGATTCATTATGTCATTAAACAGC  429
```

```
Sbjct                3162  ..........................................................  3221

CDS:dihydroxyacetone   88  L  S  K  E  S  L  Q  S  V  D  V  L  R  E  E  V  S  E  I  L
Query                430  TTTCCAAGGAATCCCTTCAATCTGTGGATGTCCTCCGAGAGGAAGTGAGTGAGATCTTAG  489
Sbjct                3222  ..........................................................  3281

CDS:dihydroxyacetone  108  D  E  M  S  H  K  L  R  L  G  A  I  R  F  C  A  F  T  L  S
Query                490  ATGAAATGAGTCACAAACTGCGTCTTGGAGCCATTCGGTTTTGTGCCTTCACCCTGAGCA  549
Sbjct                3282  ..........................................................  3341

CDS:dihydroxyacetone  128  K  V  F  K  Q  I  F  S  K  V  C  V  N  E  E  G  I  Q  K  L
Query                550  AAGTATTTAAACAAATTTTCTCGAAGGTGTGTGTAAATGAAGAAGGTATTCAGAAACTAC  609
Sbjct                3342  ..........................................................  3401

CDS:dihydroxyacetone  148  Q  R  A  I  Q  E  H  P  V  V  L  L  P  S  H  R  S  Y  I  D
Query                610  AAAGAGCCATCCAGGAGCATCCTGTTGTTCTGCTGCCTAGTCATCGAAGTTACATTGACT  669
Sbjct                3402  ..........................................................  3461

CDS:dihydroxyacetone  168  F  L  M  L  S  F  L  L  Y  N  Y  D  L  P  V  P  V  I  A  A
Query                670  TCCTCATGTTGTCTTTTCTTCTATACAATTATGATTTGCCTGTGCCAGTTATAGCAGCAG  729
Sbjct                3462  ..........................................................  3521

CDS:dihydroxyacetone  188  G  M  D  F  L  G  M  K  M  V  G  E  L  L  R  M  S  G  A  F
Query                730  GAATGGACTTCCTGGGAATGAAAATGGTTGGTGAGCTGCTACGAATGTCGGGTGCCTTTT  789
Sbjct                3522  ..........................................................  3581

CDS:dihydroxyacetone  208  F  M  R  R  T  F  G  G  N  K  L  Y  W  A  V  F  S  E  Y  V
Query                790  TCATGCGGCGTACCTTTGGTGGCAATAAACTCTACTGGGCTGTATTCTCTGAATATGTAA  849
Sbjct                3582  ..........................................................  3641

CDS:dihydroxyacetone  228  K  T  M  L  R  N  G  Y  A  P  V  E  F  F  L  E  G  T  R  S
Query                850  AAACTATGTTACGGAATGGTTATGCTCCTGTTGAATTTTTCCTCGAAGGGACAAGAAGCC  909
Sbjct                3642  ..........................................................  3701

CDS:dihydroxyacetone  248  R  S  A  K  T  L  T  P  K  F  G  L  L  N  I  V  M  E  P  F
Query                910  GCTCTGCCAAGACATTGACTCCTAAATTTGGTCTTCTGAATATTGTGATGGAGCCATTTT  969
Sbjct                3702  ..........................................................  3761

CDS:dihydroxyacetone  268  F  K  R  E  V  F  D  T  Y  L  V  P  I  S  I  S  Y  D  K  I
Query                970  TTAAAAGAGAAGTTTTTGATACCTACCTTGTCCCAATTAGTATCAGTTATGATAAGATCT 1029
Sbjct                3762  ..........................................................  3821

CDS:dihydroxyacetone  288  L  E  E  T  L  Y  V  Y  E  L  L  G  V  P  K  P  K  E  S  T
Query                1030  TGGAAGAAACTCTTTATGTGTATGAGCTTCTAGGGGTTCCTAAACCAAAAGAGTCTACAA 1089
Sbjct                3822  ..........................................A.......  3881

CDS:dihydroxyacetone  308  T  G  L  L  K  A  R  K  I  L  S  E  N  F  G  S  I  H  V  Y
Query                1090  CTGGGTTGCTGAAAGCCAGAAAGATTCTCTCTGAAAATTTTGGAAGCATCCATGTGTACT 1149
Sbjct                3882  ..........................................................  3941

CDS:dihydroxyacetone  328  F  G  D  P  V  S  L  R  S  L  A  A  G  R  M  S  R  S  S  Y
Query                1150  TTGGAGATCCTGTGTCACTTCGATCTTTGGCAGCTGGGAGGATGAGTCGGAGCTCATATA 1209
Sbjct                3942  ..........................................................  4001

CDS:dihydroxyacetone  348  N  L  V  P  R  Y  I  P  Q  K  Q  S  E  D  M  H  A  F  V  T
Query                1210  ACTTGGTTCCAAGATACATTCCTCAGAAACAGTCTGAGGACATGCATGCCTTTGTCACTG 1269
Sbjct                4002  ..........................................................  4061

CDS:dihydroxyacetone  368  E  V  A  Y  K  M  E  L  L  Q  I  E  N  M  V  L  S  P  W  T
```

1082 G>A

```
Query                1270  AAGTTGCCTACAAAATGGAGCTTCTGCAAATTGAAAACATGGTTTTGAGCCCCTGGACCC 1329
Sbjct                4062  ..........................................................  4121

CDS:dihydroxyacetone  388  L  I  V  A  V  L  L  Q  N  R  P  S  M  D  F  D  A  L  V  E
Query                1330  TAATAGTTGCTGTTCTGCTTCAGAACCGGCCATCCATGGACTTTGATGCTCTGGTGGAAA 1389
Sbjct                4122  ..........................................................  4181

CDS:dihydroxyacetone  408  K  T  L  W  L  K  G  L  T  Q  A  F  G  G  F  L  I  W  P  D
Query                1390  AGACTTTATGGCTAAAAGGCTTAACCCAGGCATTTGGAGGGTTTCTCATTTGGCCTGATA 1449
Sbjct                4182  ..........................................................  4241

CDS:dihydroxyacetone  428  N  K  P  A  E  E  V  V  P  A  S  I  L  L  H  S  N  I  A  S
Query                1450  ATAAACCTGCTGAAGAAGTTGTCCCGGCCAGCATTCTTCTGCATTCCAACATTGCCAGCC 1509
Sbjct                4242  ..........................................................  4301

CDS:dihydroxyacetone  448  L  V  K  D  Q  V  I  L  K  V  D  S  G  D  S  E  V  V  D  G
Query                1510  TTGTCAAAGACCAGGTGATTCTGAAAGTGGACTCCGGAGACTCGGAAGTGGTCGATGGGC 1569
Sbjct                4302  ..........................................................  4361

CDS:dihydroxyacetone  468  L  M  L  Q  H  I  T  L  L  M  C  S  A  Y  R  N  Q  L  L  N
Query                1570  TTATGCTCCAGCACATCACTCTCCTCATGTGCTCAGCTTATAGGAACCAGCTGCTCAACA 1629
Sbjct                4362  ..........................................................  4421

CDS:dihydroxyacetone  488  I  F  V  R  P  S  L  V  A  V  A  L  Q  M  T  P  G  F  R  K
Query                1630  TTTTTGTGCGCCCATCCTTAGTAGCAGTAGCATTGCAGATGACACCAGGGTTCAGGAAAG 1689
Sbjct                4422  ..........................................................  4481

CDS:dihydroxyacetone  508  E  D  V  Y  S  C  F  R  F  L  R  D  V  F  A  D  E  F  I  F
Query                1690  AGGATGTCTACAGTTGCTTTCGCTTCCTACGTGATGTTTTTGCAGATGAGTTCATCTTCC 1749
Sbjct                4482  ..........................................................  4541

CDS:dihydroxyacetone  528  L  P  G  N  T  L  K  D  F  E  E  G  C  Y  L  L  C  K  S  E
Query                1750  TTCCAGGAAACACACTAAAGGACTTTGAAGAAGGCTGTTACCTGCTTTGTAAAAGTGAAG 1809
Sbjct                4542  ..........................................................  4601

CDS:dihydroxyacetone  548  A  I  Q  V  T  T  K  D  I  L  V  T  E  K  G  N  T  V  L  E
Query                1810  CCATACAAGTGACTACGAAAGACATCCTAGTTACAGAGAAAGGAAATACTGTGTTAGAAT 1869
Sbjct                4602  ..........................................................  4661

CDS:dihydroxyacetone  568  F  L  V  G  L  F  K  P  F  V  E  S  Y  Q  I  I  C  K  Y  L
Query                1870  TTTTAGTAGGACTCTTTAAACCTTTTGTGGAAAGCTATCAGATAATTTGCAAGTACCTTT 1929
Sbjct                4662  ..........................................................  4721

CDS:dihydroxyacetone  588  L  S  E  E  E  D  H  F  S  E  E  Q  Y  L  A  A  V  R  K  F
Query                1930  TGAGTGAAGAAGAGGACCACTTCAGTGAGGAACAGTACTTGGCTGCAGTCAGAAAATTCA 1989
Sbjct                4722  ..........................................................  4781

CDS:dihydroxyacetone  608  T  S  Q  L  L  D  Q  G  T  S  Q  C  Y  D  V  L  S  S  D  V
Query                1990  CAAGTCAGCTTCTCGATCAAGGTACCTCTCAATGTTATGATGTATTATCTTCTGATGTGC 2049
Sbjct                4782  ..........................................................  4841

CDS:dihydroxyacetone  628  Q  K  N  A  L  A  A  C  V  R  L  G  V  V  E  K  K  K  I  N
Query                2050  AGAAAAACGCCTTAGCAGCCTGTGTGAGGCTCGGAGTAGTGGAGAAGAAGAAGATAAATA 2109
Sbjct                4842  ..........................................................  4901

CDS:dihydroxyacetone  648  N  N  C  I  F  N  V  N  E  P  A  T  T  K  L  E  E  M  L  G
Query                2110  ATAACTGTATATTTAATGTGAATGAACCTGCCACAACCAAATTAGAAGAAATGCTTGGTT 2169
Sbjct                4902  ..........................................................  4961
```

```
CDS:dihydroxyacetone  668   C  K  T  P  I  G  K  P  A  T  A  K  L
Query                 2170  GTAAGACACCAATAGGAAAACCAGCCACTGCAAAACTTTAATAATCAACAAATAGTTATG  2229
Sbjct                 4962  ............................................................  5021

Query                 2230  GAAAATTCGGTCACGTAATTACTCTCATCGAAGGACTCATTACAACAAACAGGGAAGTAA  2289
Sbjct                 5022  ............................................................  5081

Query                 2290  AGGAAGAGACACATCCTCTCATACTCCCTGAGACTCTGAGAACAGTGGACGCAGAGGGAA  2349
Sbjct                 5082  ............................................................  5141

Query                 2350  GAGATGATCATTGGAAGCAATCAGTTTACTCTTCCCCACCACAGTGGTTAAAAGGCGTTT  2409
Sbjct                 5142  ............................................................  5201

Query                 2410  GTATCTGACACTATGTGTGTGTTTTAAAATAAACTTTTGGAAACATGTTTGGAAAA  2465
Sbjct                 5202  ......................................................  5257
```



BLAST is a registered trademark of the National Library of Medicine

NIH Websites Are Changing

- Get the Latest Updates and FAQs on the transition
- Per Executive Order 14434, federal agencies are now using "Super Intelligence" (SI) in place of "Artificial Intelligence" (AI). You may see both terms across NIH content during this transition.

HHS Vulnerability Disclosure