NRCD Human Full-Length cDNA Clone

Gene Engineering Division
RIKEN BioResource Research Center

## RIKEN Clone ID : ARe99G12

Lot# : 7672_B6Jg

Vector : pKA1U5

| Gene | ITGB5 | |
|---|---|---|
| RefSeq_mRNA | NM_002213.5 | 4440 bp |

### ● Plasmid DNA purification

Date : 2026/10/19 Culture : LB (100 ug/ml Ampicillin) 5 ml -> at 37 deg C O/N

Date : 2026/10/20 Purification : QIAGEN Miniprep kit -> $dH_2O$ 100 ul

### ● Digestion by restriction enzyme/Concentrarion calibration

Date : 2026/10/13

DNA concentration (O.D.): 322 ng/ul

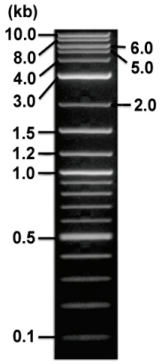
| | | |
|---|---|---|
| DNA | 0.3 | ul |
| Enzyme (BamHI ) | 1 | ul |
| Buffer H | 1 | ul |
| $dH_2O$ | 7.7 | ul |
| Total | 10 | ul |

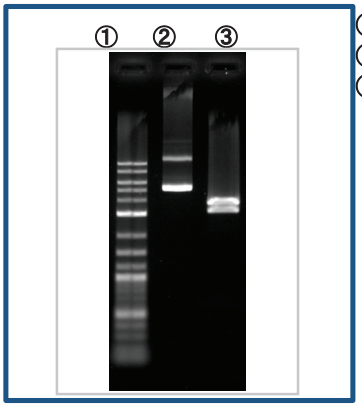
< Size of fragment expected from this clone >

BamHI 3.1kb (vector), 3.7 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 : 2026/10/22

| full sequence | ARe99G12hts01.seq |
|---|---|
| | |
| | |

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

Date : 2026/11/10

| | | |
|---|---|---|
| DNA ( 322 ng/ul) | 84 | ul |
| 10x TE | 108 | ul |
| $dH_2O$ | 890 | ul |
| Total | 1,082 | ul |

### ● Shipping

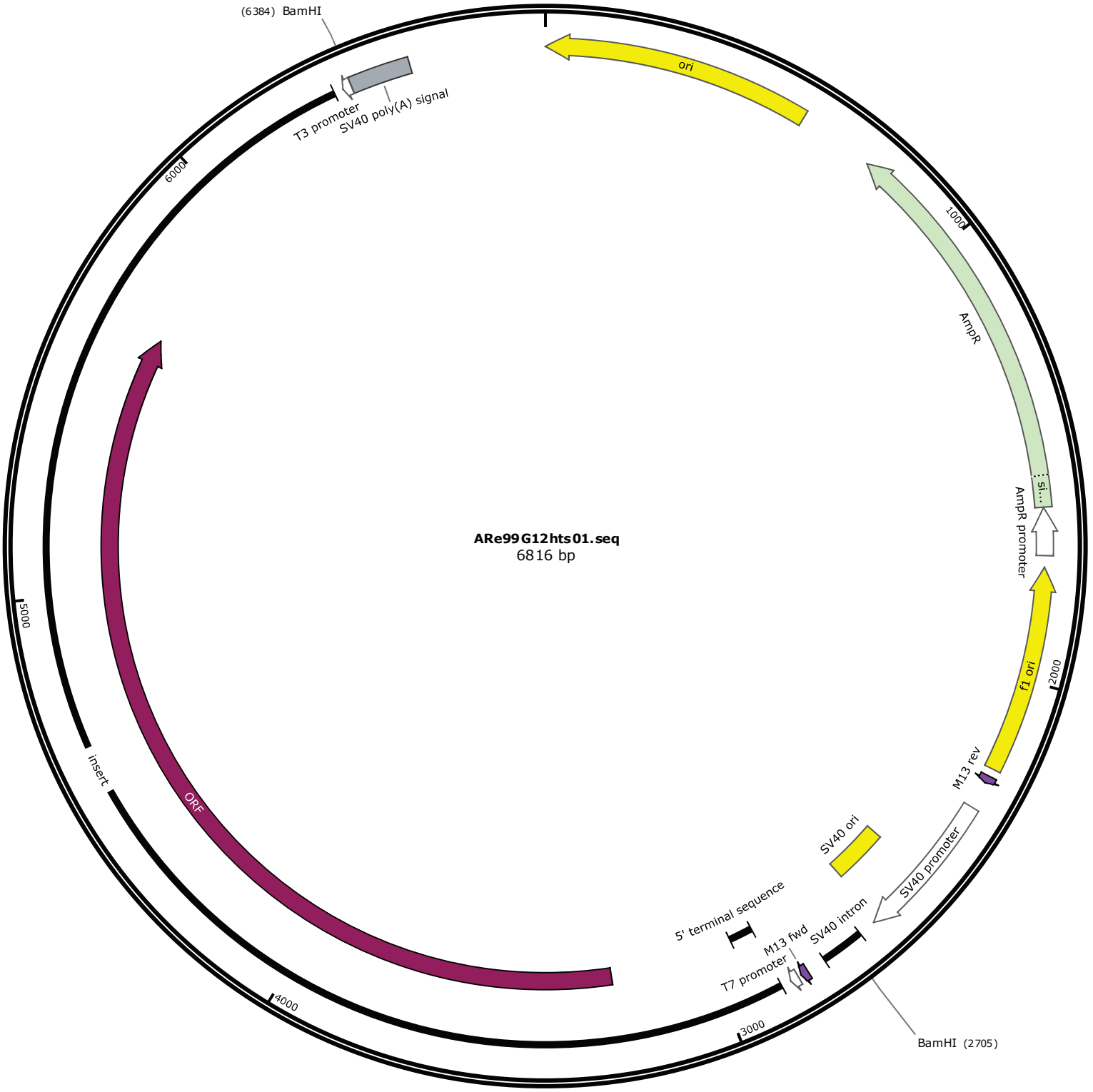
☑ Conc. : 25 ng/μl, Volume : 40 μl

☐ Conc. : __ ng/μl, Volume : __ μl

APPROVED BY :

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'26.11.10
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http://dna.brc.riken.jp/index.html


(6384) BamHI
T3 promoter
SV40 poly(A) signal
ori
AmpR
AmpR promoter
f1 ori
M13 rev
SV40 ori
SV40 promoter
SV40 intron
5' terminal sequence
M13 fwd
T7 promoter
BamHI (2705)
insert
ORF
ARe99G12hts01.seq
6816 bp
1000
2000
3000
4000
5000
6000

**BLAST Results**

Questions/comments

**Blast 2 sequences**

**Job title: BC006541:Homo sapiens integrin, beta 5, mRNA...**

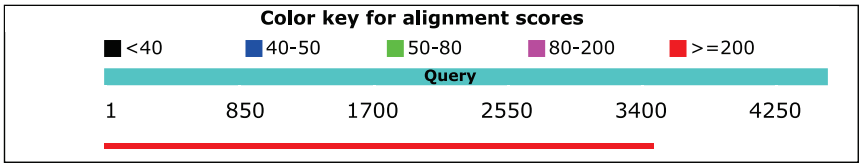
**RID** DKDWM0J1114 (Expires on 10-23 15:13 pm)

| | | | |
|---|---|---|---|
| **Query ID** | NM_002213.5 | **Subject ID** | lcl\|Query_440733 |
| **Description** | Homo sapiens integrin subunit beta 5 (ITGB5), transcript variant 1, mRNA | **Description** | None<br>See details |
| **Molecule type** | nucleic acid | **Molecule type** | dna |
| **Query Length** | 4440 | **Subject Length** | 6816 |
| | | **Program** | BLASTN 2.17.0+ |

ARe99G12hts01.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 | 6348 | 6348 | 77% | 0.0 | 99.97% | Query_440733 |

## Alignments

Sequence ID: Query_440733 Length: 6816 Number of Matches: 1
Range 1: 2879 to 6318

| Score | Expect | Identities | Gaps | Strand | Frame |
|---|---|---|---|---|---|
| 6348 bits(3437) | 0.0() | 3439/3440(99%) | 0/3440(0%) | Plus/Plus | |

Features:

```
Query      1     AGAGTGTGCCGGCGCGCGGGGGAGTCTCGGCGCTGGGCGCGTCTCGGAGCCCAAGTCGCG  60
Sbjct      2879  ............................................................  2938

Query      61    GCCGCCGAGCGGAGCCAGCCCCTCCCCTACCCGGAGCAGCCCGCTGGGGCCGTCCCGAGC  120
Sbjct      2939  ............................................................  2998

Query      121   GGCGACACACTAGGAGTCCCGGCCGGCCAGCCAGGGCAGCCGCGGTCCCGGGACTCGGCC  180
Sbjct      2999  ............................................................  3058

Query      181   GTGAGTGCTGCGGGACGGATGGTggcggcggggcgcgggccagcgcgggcgccgtgagcc  240
Sbjct      3059  ............................................................  3118

Query      241   ggagctgcgcgcggggcatgcggctgcggcccccggccctcggcccccgcgctccggccc  300
Sbjct      3119  ............................................................  3178

Query      301   cagccccggccgccggcccccgcggagtgcagcgaccgcgccgccgcTGAGGGAGGCGCC  360
Sbjct      3179  ............................................................  3238

CDS:integrin beta-5 1          M  P  R  A  P  A  P  L  Y  A  C  L  L  G  L  C  A  L
Query      361   CCACCATGCCGCGGGCCCCGGCGCCGCTGTACGCCTGCCTCCTGGGGCTCTGCGCGCTCC  420
Sbjct      3239  ............................................................  3298
```

```
CDS:integrin beta-5   19    L  P  R  L  A  G  L  N  I  C  T  S  G  S  A  T  S  C  E  E
Query                 421   TGCCCCGGCTCGCAGGTCTCAACATATGCACTAGTGGAAGTGCCACCTCATGTGAAGAAT  480
Sbjct                 3299  ............................................................  3358

CDS:integrin beta-5   39    C  L  L  I  H  P  K  C  A  W  C  S  K  E  D  F  G  S  P  R
Query                 481   GTCTGCTAATCCACCCAAAATGTGCCTGGTGCTCCAAAGAGGACTTCGGAAGCCCACGGT  540
Sbjct                 3359  ............................................................  3418

CDS:integrin beta-5   59    S  I  T  S  R  C  D  L  R  A  N  L  V  K  N  G  C  G  G  E
Query                 541   CCATCACCTCTCGGTGTGATCTGAGGGCAAACCTTGTCAAAAATGGCTGTGGAGGTGAGA  600
Sbjct                 3419  ............................................................  3478

CDS:integrin beta-5   79    I  E  S  P  A  S  S  F  H  V  L  R  S  L  P  L  S  S  K  G
Query                 601   TAGAGAGCCCAGCCAGCAGCTTCCATGTCCTGAGGAGCCTGCCCCTCAGCAGCAAGGGTT  660
Sbjct                 3479  ............................................................  3538

CDS:integrin beta-5   99    S  G  S  A  G  W  D  V  I  Q  M  T  P  Q  E  I  A  V  N  L
Query                 661   CGGGCTCTGCAGGCTGGGACGTCATTCAGATGACACCACAGGAGATTGCCGTGAACCTCC  720
Sbjct                 3539  ............................................................  3598

CDS:integrin beta-5   119   R  P  G  D  K  T  T  F  Q  L  Q  V  R  Q  V  E  D  Y  P  V
Query                 721   GGCCCGGTGACAAGACCACCTTCCAGCTACAGGTTCGCCAGGTGGAGGACTATCCTGTGG  780
Sbjct                 3599  ............................................................  3658

CDS:integrin beta-5   139   D  L  Y  Y  L  M  D  L  S  L  S  M  K  D  D  L  D  N  I  R
Query                 781   ACCTGTACTACCTGATGGACCTCTCCCTGTCCATGAAGGATGACTTGGACAATATCCGGA  840
Sbjct                 3659  ............................................................  3718

CDS:integrin beta-5   159   S  L  G  T  K  L  A  E  E  M  R  K  L  T  S  N  F  R  L  G
Query                 841   GCCTGGGCACCAAACTCGCGGAGGAGATGAGGAAGCTCACCAGCAACTTCCGGTTGGGAT  900
Sbjct                 3719  ............................................................  3778

CDS:integrin beta-5   179   F  G  S  F  V  D  K  D  I  S  P  F  S  Y  T  A  P  R  Y  Q
Query                 901   TTGGGTCTTTTGTTGATAAGGACATCTCTCCTTTCTCCTACACGGCACCGAGGTACCAGA  960
Sbjct                 3779  ............................................................  3838

CDS:integrin beta-5   199   T  N  P  C  I  G  Y  K  L  F  P  N  C  V  P  S  F  G  F  R
Query                 961   CCAATCCGTGCATTGGTTACAAGTTGTTTCCAAATTGCGTCCCCTCCTTTGGGTTCCGCC  1020
Sbjct                 3839  ............................................................  3898

CDS:integrin beta-5   219   H  L  L  P  L  T  D  R  V  D  S  F  N  E  E  V  R  K  Q  R
Query                 1021  ATCTGCTGCCTCTCACAGACAGAGTGGACAGCTTCAATGAGGAAGTTCGGAAACAGAGGG  1080
Sbjct                 3899  ............................................................  3958

CDS:integrin beta-5   239   V  S  R  N  R  D  A  P  E  G  G  F  D  A  V  L  Q  A  A  V
Query                 1081  TGTCCCGGAACCGAGATGCCCCTGAGGGGGGCTTTGATGCAGTACTCCAGGCAGCCGTCT  1140
Sbjct                 3959  ............................................................  4018

CDS:integrin beta-5   259   C  K  E  K  I  G  W  R  K  D  A  L  H  L  L  V  F  T  T  D
Query                 1141  GCAAGGAGAAGATTGGCTGGCGAAAGGATGCACTGCATTTGCTGGTGTTCACAACAGATG  1200
Sbjct                 4019  ............................................................  4078

CDS:integrin beta-5   279   D  V  P  H  I  A  L  D  G  K  L  G  G  L  V  Q  P  H  D  G
Query                 1201  ATGTGCCCCACATCGCATTGGATGGAAAATTGGGAGGCCTGGTGCAGCCACACGATGGCC  1260
Sbjct                 4079  ............................................................  4138

CDS:integrin beta-5   299   Q  C  H  L  N  E  A  N  E  Y  T  A  S  N  Q  M  D  Y  P  S
Query                 1261  AGTGCCACCTGAACGAGGCCAACGAGTACACTGCATCCAACCAGATGGACTATCCATCCC  1320

Sbjct                 4139  ............................................................  4198

CDS:integrin beta-5   319   L  A  L  L  G  E  K  L  A  E  N  N  I  N  L  I  F  A  V  T
Query                 1321  TTGCCTTGCTTGGAGAGAAATTGGCAGAGAACAACATCAACCTCATCTTTGCAGTGACAA  1380
Sbjct                 4199  ............................................................  4258

CDS:integrin beta-5   339   K  N  H  Y  M  L  Y  K  N  F  T  A  L  I  P  G  T  T  V  E
Query                 1381  AAAACCATTATATGCTGTACAAGAATTTTACAGCCCTGATACCTGGAACAACGGTGGAGA  1440
Sbjct                 4259  ............................................................  4318

CDS:integrin beta-5   359   I  L  D  G  D  S  K  N  I  I  Q  L  I  I  N  A  Y  N  S  I
Query                 1441  TTTTAGATGGAGACTCCAAAAATATTATTCAACTGATTATTAATGCATACAATAGTATCC  1500
Sbjct                 4319  ............................................................  4378

CDS:integrin beta-5   379   R  S  K  V  E  L  S  V  W  D  Q  P  E  D  L  N  L  F  F  T
Query                 1501  GGTCTAAAGTGGAGTTGTCAGTCTGGGATCAGCCTGAGGATCTTAATCTCTTCTTTACTG  1560
Sbjct                 4379  ............................................................  4438

CDS:integrin beta-5   399   A  T  C  Q  D  G  V  S  Y  P  G  Q  R  K  C  E  G  L  K  I
Query                 1561  CTACCTGCCAAGATGGGGTATCCTATCCTGGTCAGAGGAAGTGTGAGGGTCTGAAGATTG  1620
Sbjct                 4439  ............................................................  4498

CDS:integrin beta-5   419   G  D  T  A  S  F  E  V  S  L  E  A  R  S  C  P  S  R  H  T
Query                 1621  GGGACACGGCATCTTTTGAAGTATCATTGGAGGCCCGAAGCTGTCCCAGCAGACACACGG  1680
Sbjct                 4499  ............................................................  4558

CDS:integrin beta-5   439   E  H  V  F  A  L  R  P  V  G  F  R  D  S  L  E  V  G  V  T
Query                 1681  AGCATGTGTTTGCCCTGCGGCCGGTGGGATTCCGGGACAGCCTGGAGGTGGGGGTCACCT  1740
Sbjct                 4559  ............................................................  4618

CDS:integrin beta-5   459   Y  N  C  T  C  G  C  S  V  G  L  E  P  N  S  A  R  C  N  G
Query                 1741  ACAACTGCACGTGCGGCTGCAGCGTGGGGCTGGAACCCAACAGCGCCAGGTGCAACGGGA  1800
Sbjct                 4619  ............................................................  4678

CDS:integrin beta-5   479   S  G  T  Y  V  C  G  L  C  E  C  S  P  G  Y  L  G  T  R  C
Query                 1801  GCGGGACCTATGTCTGCGGCCTGTGTGAGTGCAGCCCCGGCTACCTGGGCACCAGGTGCG  1860
Sbjct                 4679  ............................................................  4738

CDS:integrin beta-5   499   E  C  Q  D  G  E  N  Q  S  V  Y  Q  N  L  C  R  E  A  E  G
Query                 1861  AGTGCCAGGATGGGGAGAACCAGAGCGTGTACCAGAACCTGTGCCGGGAGGCAGAGGGCA  1920
Sbjct                 4739  ............................................................  4798

CDS:integrin beta-5   519   K  P  L  C  S  G  R  G  D  C  S  C  N  Q  C  S  C  F  E  S
Query                 1921  AGCCACTGTGCAGCGGGCGTGGGGACTGCAGCTGCAACCAGTGCTCCTGCTTCGAGAGCG  1980
Sbjct                 4799  ............................................................  4858

CDS:integrin beta-5   539   E  F  G  K  I  Y  G  P  F  C  E  C  D  N  F  S  C  A  R  N
Query                 1981  AGTTTGGCAAGATCTATGGGCCTTTCTGTGAGTGCGACAACTTCTCCTGTGCCAGGAACA  2040
Sbjct                 4859  ............................................................  4918

CDS:integrin beta-5   559   K  G  V  L  C  S  G  H  G  E  C  H  C  G  E  C  K  C  H  A
Query                 2041  AGGGAGTCCTCTGCTCAGGCCATGGCGAGTGTCACTGCGGGGAATGCAAGTGCCATGCAG  2100
Sbjct                 4919  ............................................................  4978

CDS:integrin beta-5   579   G  Y  I  G  D  N  C  N  C  S  T  D  I  S  T  C  R  G  R  D
Query                 2101  GTTACATCGGGGACAACTGTAACTGCTCGACAGACATCAGCACATGCCGGGGCAGAGATG  2160
Sbjct                 4979  ............................................................  5038

CDS:integrin beta-5   599   G  Q  I  C  S  E  R  G  H  C  L  C  G  Q  C  Q  C  T  E  P
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Query              2161  GCCAGATCTGCAGCGAGCGTGGGCACTGTCTCTGTGGGCAGTGCCAATGCACGGAGCCGG  2220
Sbjct              5039  ............................................................  5098

CDS:integrin beta-5 619  G  A  F  G  E  M  C  E  K  C  P  T  C  P  D  A  C  S  T  K
Query              2221  GGGCCTTTGGGGAGATGTGTGAGAAGTGCCCCACCTGCCCGGATGCATGCAGCACCAAGA  2280
Sbjct              5099  ............................................................  5158

CDS:integrin beta-5 639  R  D  C  V  E  C  L  L  L  H  S  G  K  P  D  N  Q  T  C  H
Query              2281  GAGATTGCGTCGAGTGCCTGCTGCTCCACTCTGGGAAACCTGACAACCAGACCTGCCACA  2340
Sbjct              5159  ............................................................  5218

CDS:integrin beta-5 659  S  L  C  R  D  E  V  I  T  W  V  D  T  I  V  K  D  D  Q  E
Query              2341  GCCTATGCAGGGATGAGGTGATCACATGGGTGGACACCATCGTGAAAGATGACCAGGAGG  2400
Sbjct              5219  ............................................................  5278

CDS:integrin beta-5 679  A  V  L  C  F  Y  K  T  A  K  D  C  V  M  M  F  T  Y  V  E
Query              2401  CTGTGCTATGTTTCTACAAAACCGCCAAGGACTGCGTCATGATGTTCACCTATGTGGAGC  2460
Sbjct              5279  ............................................................  5338

CDS:integrin beta-5 699  L  P  S  G  K  S  N  L  T  V  L  R  E  P  E  C  G  N  T  P
Query              2461  TCCCCAGTGGGAAGTCCAACCTGACCGTCCTCAGGGAGCCAGAGTGTGGAAACACCCCCA  2520
Sbjct              5339  ............................................................  5398

CDS:integrin beta-5 719  N  A  M  T  I  L  L  A  V  V  G  S  I  L  L  V  G  L  A  L
Query              2521  ACGCCATGACCATCCTCCTGGCTGTGGTCGGTAGCATCCTCCTTGTTGGGCTTGCACTCC  2580
Sbjct              5399  ............................................................  5458

CDS:integrin beta-5 739  L  A  I  W  K  L  L  V  T  I  H  D  R  R  E  F  A  K  F  Q
Query              2581  TGGCTATCTGGAAGCTGCTTGTCACCATCCACGACCGGAGGGAGTTTGCAAAGTTTCAGA  2640
Sbjct              5459  ............................................................  5518

CDS:integrin beta-5 759  S  E  R  S  R  A  R  Y  E  M  A  S  N  P  L  Y  R  K  P  I
Query              2641  GCGAGCGATCCAGGGCCCGCTATGAAATGGCTTCAAATCCATTATACAGAAAGCCTATCT  2700
Sbjct              5519  ............................................................  5578

CDS:integrin beta-5 779  S  T  H  T  V  D  F  T  F  N  K  F  N  K  S  Y  N  G  T  V
Query              2701  CCACGCACACTGTGGACTTCACCTTCAACAAGTTCAACAAATCCTACAATGGCACTGTGG  2760
Sbjct              5579  ............................................................  5638

CDS:integrin beta-5 799  D
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Sbjct              5639  ............................................................  5698

Query              2821  CGCCTTGCACGGCTGCTCGGCTTGATCACAGCTCCCTAGGTAGGCACCACAGAGAAGACC  2880
Sbjct              5699  ............................................................  5758

Query              2881  TTCTAGTGAGCCTGGGCCAGGAGCCCACAGTGCCTGTACAGGAAGGTGCCTGGCCATGTC  2940
Sbjct              5759  ............................................................  5818

Query              2941  ACCTGGCTGCTAGGCCAGAGCCATGCCAGGCTGCGTCCCTCCGAGCTTGGGATAAAGCAA  3000
Sbjct              5819  ............................................................  5878

Query              3001  GGGGACCTTGGCGCTCTCAGCTTTCCCTGCCACATCCAGCTTGTTGTCCCAATGAAATAC  3060
Sbjct              5879  ............................................................  5938

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Sbjct              5939  ............................................................  5998

Query              3121  AAGACTGTCAGGAAGGGTCGGAGTCTGTAAAACCAGCATACAGTTTGGCTTTTTTCACAT  3180



Sbjct              5999  ............................................................  6058

Query              3181  TGATCATTTTTATATGAAATAAAAAGATCCTGCATTTATGGTGTAGTTCTGAGTCCTGAG  3240
Sbjct              6059  ............................................................  6118

Query              3241  ACTTTTCTGCGTGATGGCTATGCCTTGCACACAGGTGTTGGTGATGGGGCTGTTGAGATG  3300
Sbjct              6119  ............................................................  6178

Query              3301  CCTGTTGAAGGTACATCGTTTGCAAATGTCAGTTTCCTCTCCTGTCCGTGTTTGTTTAGT  3360
Sbjct              6179  ............................................................  6238

Query              3361  ACTTTTATAATGAAAAGAAACAAGATTGTTTGGGATTGGAAGTAAAGATTAAAACCAAAA  3420
Sbjct              6239  ............................................................  6298

Query              3421  GAATTTGTGTTTGTCTGATA  3440
Sbjct              6299  ............C.......  6318
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