

10/10

lh

PS 6

Equine infectious anemia virus, FDIIVIS S2 protein gene.

~~5' ATG GGA TTA TTT GGT AAA GGG GTA ACA TGG TCA GCA TTG CAT TCT ATG GGG 3'~~

5' ATG|GGA|TTA|TTT|GGT|AAA|GGG|GTA|ACA|TGG|TCA|GCA|TTG|CAT|TCT|ATG|GGG 3'  
3' TAC|CC~~T~~AAT|AAA|CCA|TTT|CCC|CAT|TGT|ACC|AGT|CGT|AAC|GTA|AGA|TAC|CCC 5'

A & T ⇒ 29 bases ~~(29)~~ There are more A & T bases than C & G bases; therefore, since A=T are double bonded together and G=C<sup>are</sup> triple bonded, having less triple bonds than double bonds will cause this region of DNA to melt faster than a stretch of DNA w/ 50%AT - 50%GC content.

mRNA: ✓

5' AUG|GGA|UUA|UUU|GGU|AAA|GGG|GUA|ACA|UGG|UCA|GCA|UUG|CAU|UCU|AUG|GGG 3'  
NH<sub>3</sub><sup>+</sup> - MET - GLY - LEU - PHE - GLY - LYS - GLY - VAL - THR - TRP - SER - ALA - LEU - HIS - SER - MET - GLY - COO<sup>-</sup>  
(Protein #1) ↗

3' UAC|CCU|AAU|AAA|CCA|UUU|CCC|CAU|UGU|ACC|AGU|CGU|AAC|GUA|AGA|UAC|CCC 5'  
COO<sup>-</sup> - HIS - SER - STOP - LYS - THR - PHE - PRO - TYR - CYS - PRO - STOP - CYS - GLN - MET - ARG - HIS - PRO NH<sub>3</sub><sup>+</sup>  
(Protein #2) ↗

← Always translate 5' to 3'

Protein #1  
■ = Polar ↓ 9 AAs  
■ = non-Polar ↓ 8 AAs

Since this protein is mostly polar, ~~has more~~ the protein is more likely to be hydrophilic.

Protein #2  
■ = Polar ↓ 10 AAs  
■ = non-Polar ↓ 5 AAs  
Since this protein is mostly polar, the protein is more likely to be hydrophilic.

GenBank: FJ914223.1

## Equine infectious anemia virus strain FDDV15 S2 protein (S2) gene, complete cds

[Features](#) [Sequence](#)

LOCUS FJ914223 207 bp RNA linear VRL

25-MAY-2009

DEFINITION Equine infectious anemia virus strain FDDV15 S2 protein (S2) gene,

complete cds.

ACCESSION FJ914223

VERSION FJ914223.1 GI:237847696

KEYWORDS

SOURCE Equine infectious anemia virus

ORGANISM Equine infectious anemia virus

Viruses; Retro-transcribing viruses; Retroviridae; Orthoretrovirinae; Lentivirus; Equine lentivirus group.

REFERENCE 1 (bases 1 to 207)

AUTHORS Xu,G.

TITLE Construction and in vivo evaluation of an infectious clone of EIAV

by replacing attenuated sites in S2 gene with the

virulent strain

isolated in China through retro-mutations

JOURNAL Unpublished

REFERENCE 2 (bases 1 to 207)

AUTHORS Xu,G.

TITLE Direct Submission

JOURNAL Submitted (13-APR-2009) Chinese Academy of Agricultural Sciences,

Harbin Veterinary Research Institute, No. 427, Ma Duan

Street, Harbin, Heilongjiang 150001, China

FEATURES Location/Qualifiers

source

1..207

/organism="Equine infectious anemia virus"

/mol\_type="genomic RNA"

/strain="FDDV15"

/db\_xref="taxon:11665"

/country="China"

/note="fetal donkey dermal (FDD) cell-adapted

attenuated

vaccine strain; derived from donkey leukocyte-

adapted

strain by passaging 15 times in FDD cells"

[gene](#)

1..207

/gene="S2"

[CDS](#)

1..207

/gene="S2"

/codon\_start=1

/product="S2 protein"

/protein\_id="ACR23310.1"

/db\_xref="GI:237847697"

/translation="MGLFGKGVTVSALHSMGVSQGEYQPLSPNKQNOQTHRKGIIWYI

NPIVIMIAIKKKWCRQETQDTKKK"

ORIGIN

```

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61 gggaatatc aaccctatc acccaacaaa cagaatcaac agacacacag aaaggggatc
121 atatggtata tcaaccctat tgttataatg atagccataa agaagaaatg gcagaggcaa

```

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### Sequence Analysis Tools

#### [BLAST Sequence](#)

Find regions of similarity between this sequence and other sequences using BLAST.

#### [Pick Primers](#)

Design and test primers for this sequence using Primer-BLAST.

### Retrovirus Resource

Information and tools to support retrovirus research.

### Recent Activity

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Equine infectious anemia virus strain FDDV15 S2

Drosophila melanogaster sigma virus DM113

[sigma virus \(51\)](#) Nucleotide

Equine infectious anemia virus

[retro virus gene \(48\)](#) Nucleotide[» See more...](#)

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