ProtParam

ProtParam

User-provided sequence:

```
        10         20         30         40         50         60
MASTEGANNM PKQVEVRMHD SHLGSEEPKH RHLGLRLCDK LGKNLLLTLT VFGVILGAVC

        70         80         90        100        110        120
GGLLRLASPI HPDVVMLIAF PGDILMRMLK MLILPLIISS LITGLSGLDA KASGRLGTRA

       130        140        150        160        170        180
MVYYMSTTII AAVLGVILVL AIHPGNPKLK KQLGPGKKND EVSSLDAFLD LIRNLFPENL

       190        200        210        220        230        240
VQACFQQIQT VTKKVLVAPP PDEEANATSA VVSLLNETVT EVPEETKMVI KKGLEFKDGM

       250        260        270        280        290        300
NVLGLIGFFI AFGIAMGKMG DQAKLMVDFF NILNEIVMKL VIMIMWYSPL GIACLICGKI

       310        320        330        340        350        360
IAIKDLEVVA RQLGMYMVTV IIGLIIHGGI FLPLIYFVVT RKNPFSFFAG IFQAWITALG

       370        380        390        400        410        420
TASSAGTLPV TFRCLEENLG IDKRVTRFVL PVGATINMDG TALYEAVAAI FIAQMNGVVL

       430        440        450        460        470        480
DGGQIVTVSL TATLASVGAA SIPSAGLVTM LLILTAVGLP TEDISLLVAV DWLLDRMRTS

       490        500        510        520        530        540
VNVVGDSFGA GIVYHLSKSE LDTIDSQHRV HEDIEMTKTQ SIYDDMKNHR ESNSNQCVYA

       550        560
AHNSVIVDEC KSLHYVEYQS WV
```

References and documentation are available.

Number of amino acids: 562

Molecular weight: 60966.97

Theoretical pI: 6.13

Amino acid composition: CSV format

```
Ala (A)  44       7.8%
Arg (R)  17       3.0%
Asn (N)  21       3.7%
Asp (D)  26       4.6%
Cys (C)   8       1.4%
Gln (Q)  15       2.7%
Glu (E)  25       4.4%
Gly (G)  45       8.0%
His (H)  13       2.3%
Ile (I)  48       8.5%
Leu (L)  70      12.5%
Lys (K)  28       5.0%
Met (M)  25       4.4%
Phe (F)  21       3.7%
Pro (P)  21       3.7%
Ser (S)  33       5.9%
Thr (T)  32       5.7%
Trp (W)   4       0.7%
Tyr (Y)  11       2.0%
Val (V)  55       9.8%
Pyl (O)   0       0.0%
Sec (U)   0       0.0%
```

```
(B)   0          0.0%
(Z)   0          0.0%
(X)   0          0.0%
```

Total number of negatively charged residues (Asp + Glu): 51
Total number of positively charged residues (Arg + Lys): 45

Atomic composition:

```
Carbon      C         2754
Hydrogen    H         4461
Nitrogen    N          707
Oxygen      O          777
Sulfur      S           33
```

Formula: $C_{2754}H_{4461}N_{707}O_{777}S_{33}$
Total number of atoms: 8732

Extinction coefficients:

Extinction coefficients are in units of M^{-1} cm^{-1}, at 280 nm measured in water.

```
Ext. coefficient    38890
Abs 0.1% (=1 g/l)   0.638, assuming all pairs of Cys residues form cystines


Ext. coefficient    38390
Abs 0.1% (=1 g/l)   0.630, assuming all Cys residues are reduced
```

Estimated half-life:

The N-terminal of the sequence considered is M (Met).

```
The estimated half-life is: 30 hours (mammalian reticulocytes, in vitro).
                            >20 hours (yeast, in vivo).
                            >10 hours (Escherichia coli, in vivo).
```

Instability index:

```
The instability index (II) is computed to be 36.17
This classifies the protein as stable.
```

Aliphatic index: 118.10

Grand average of hydropathicity (GRAVY): 0.478