

AR31072PU-N

Human SEMA3A - Purified

Alternate names:

SEMA3, Sema III, Semaphorin III, Semaphorin-3A

Quantity:

25 µg

Background:

Semaphorins are a large group of structurally related secreted, GPI-anchored and transmembrane cell signaling molecules. There are 8 major classifications (1-7) of Semaphorins characterized by the existence of a conserved 500 amino acid SEMA domain at the amino terminus. Classes 3,4,6, and 7 are found in vertebrates only, whilst class 5 is found in both vertebrates and invertebrates. Each class is then divided into additional subgroups based on shared structural characteristics. Semaphorins primarily function as axon growth cone guidance factors during neuronal development. Semaphorin 3A acts as a chemo-repellent to axons, and an inhibitor of the growth of axons by signaling through receptors, Neuropilin-1 and Plexin-A.

Uniprot ID:

[Q14563](#)

NCBI:

[NP_006071](#)

GenID:

[10371](#)

Species:

Human

Source:

CHO cells

Format:

State: Lyophilized (sterile filtered) purified protein

Purity: >95% pure by SDS-PAGE and HPLC analyses

Buffer System: 10mM Sodium Phosphate, pH 7.5

Endotoxin Level: < 0.1 ng per µg (< 1 EU/µg)

Reconstitution: Restore in water to a concentration of 0.1-1.0 mg/ml.

Do not vortex. For extended storage, it is recommended to further dilute in a buffer containing a carrier protein (example 0.1% BSA) and store in working aliquots at -20°C to -80°C.

Description:

Recombinant Human Semaphorin 3A is a 751 amino acid protein containing the SEMA domain, an immunoglobulin c2-like domain and a basic domain (Arg/Lys rich) near the C-terminus.

AA Sequence:

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NYQNGKNNVP RLKLSYKEML ESNNVITFNG LANSSTYHTF LLDEERSRLY VGAKDHIFSF
DLVNIKDFQK IVWPVSYTRR DECKWAGKDI LKECANFIKV LKAYNQTHLY ACGTGAHFPI
CTYIEIGHHP EDNIFKLENS HFENGRGKSP YDPKLLTASL LIDGELYSGT AADFMGRDFA
IFRTLGHHPH IRTEQHDSRW LNDPKFISAH LIESDNPED DKVYFFREN AIDGHSKGA
THARIGQICK NDFGGHRSVL NKWTTFLKAR LICSVPGPNG IDTHFDELQD VFLMNFKDPK
NPVVYGVFTT SSNIFKGSVA CMYSMSDVRV VFLGPYAHRD GPNYQWVPYQ GRVPYPRPGT
CPSKTFGGFD STKDLRDDVI TFASSHAPMY NPVFPMNNRP IVIKTDVNYQ FTQIVVDRVD
AEDGQYDVMF IGTDTVGLVK VVSIPKETWY DLEEVLLLEEM TVFREPTAIS AMELSTKQQQ
LYIGSTAGVA QLPLHRCDIY GKACAECCLA RDPYCAWDGS ACSRYFPTAK RRTRRQDIRN
GDPLTHCSDL HHNNHHGHSP EERIIYGVEN SSTFLECSPK SQRALVYWQF QRRNEERKEE
IRVDDHIIRT DQGLLLRSLQ QKDSGNYLCH AVEHGFIQTL LKVTLEVIDT EHLEELLHKD
DDGDGSKTKE MSNSMTPSQK WYRDFMQLI NHPNLNTMDE FCEQVWKRDR KQRRQRPQHT
PGNSNKWKHL QENKKGRNRR THEFERAPRS V

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Biological Activity: Determined by its ability to bind recombinant rat Neuropilin-1 Fc Chimera in a functional ELISA assay.

Add. Information:

Centrifuge the vial prior to opening!

Storage:

Prior to reconstitution store at 2-8°C.

Following reconstitution store undiluted at 2-8°C for one month

or (in aliquots) at -20°C for longer.

Avoid repeated freezing and thawing.

Shelf life: one year from despatch.