

## 32-20604: Recombinant Human Semaphorin 3A Fc(Discontinued)

**Alternative Name :** SEMA3A, SEMAD

### Description

#### Source:CHO cells

Semaphorins are a large group of structurally-related, secreted, GPI-anchored, transmembrane, cell-signaling molecules. There are 8 major classifications of Semaphorins (the first seven ordered by number, 1-7, and the eighth designated V for virus), which are 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. The CHO cell-derived Recombinant Human Semaphorin 3A Fc is a glycosylated, disulfide-linked homodimer of 1,976 amino acid residues, which includes the SEMA domain, immunoglobulin c2-like domain, and the C-terminal basic Arg/Lys-rich domain of the mature sequence, as well as an 8-residue N-terminal His-tag and a 230-residue C-terminal Fc region linked by two glycines. Recombinant Human Semaphorin 3A Fc has a calculated molecular weight of 226.2 kDa and therefore runs above the 200kDa marker by SDS-PAGE analysis under nonreducing conditions. When run under reducing conditions, this protein migrates as three distinct bands that, due to glycosylation, run higher than expected at apparent molecular weights of approximately 120-130 kDa, 90-100 kDa, and 35-40 kDa.

### Product Info

**Amount :** 5 µg / 25 µg

**Purification :** Purity:>= 95% by SDS-PAGE gel and HPLC analyses.

**Content :** This recombinant protein is supplied in lyophilized form.

**Amino Acid :** HHHHHHHHGK NNVPRKLKSY KEMLESNNVI TFNGLANSSS YHTFLLDEER SRLYVGAKDH  
IFSFDLVNIK DFQKIVWPVS YTRRDECKWA GKDILKECAN FIKVLKAYNQ THLYACGTGA  
FHPICTYIEI GHHPEDNIFK LENSHEFNGR GKSPYDPKLL TASLLIDGEL YSGTAADFMD  
RDFAIKRTLG HHHPIRTEQH DSRWLNPKF ISAHLISESD NPEDDKVYFF FRENIDGEGH  
SGKATHARIG QICKNDFGGH RSLVKNWTF LKARLCSVP GPNGIDTHFD ELQDVFLMNF  
KDPKPNVYVG VFTTSSNIFK GSAVCMYSMS DVRRVFLGPY AHRDGPYQW VPYQGRVPYP  
RPGTCPSKTF GGFDSTKDL DDVITFARSH PAMYNPVFPM NNRPIVIKTD VNYQFTQIV  
DRVDAEDGQY DVMFIGTDVG TVLKVVSIK ETWYDLEEV LEEMTVFREP TAISAMELST  
KQQQLYIGST AGVAQLPLHR CDYKACAE CCLARDPYCA WDGSAKRYF PTAKRATRAQ  
DIRNGDPLTH CSDLHHDNHH GHSPEERIIY GVENSSTFLE CSPKSQRALV YWQFQRRNEE  
RKEEIRVDDH IIRTDQGLLL RSLQKQDSGN YLCHAVEHGF IQTLKVTLE VIDTEHLEEL  
LHKDDDGDS KTKEMSNSMT PSQKVWYRDF MQLINHPNLN TMDEFCEQVW KRDRKQRRQR  
PGHTPGNSNK WKHLQENKKG RNRRTHEFER APRSVGGPKS CDKTHTCPPC PAPELLGGPS  
VFLFPPKPKD TLMISRTPEV TCVVVDVSHE DPEVKFNWYV DGVEVHNAKT KPREEQYNST  
YRVVSVLTVL HQDWLNGKEY KCKVSNKALP APIEKTISKA KGQPREPQVY TLPPSRDELT  
KNQVSLTCLV KGFYPSDIK EWESNGQPEN NYKTTTPVLD SDGSFFLYSK LTVDKSRWQQ  
GNVFSCSVMH EALHNHYTQK SLSLSPGK

### Application Note

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