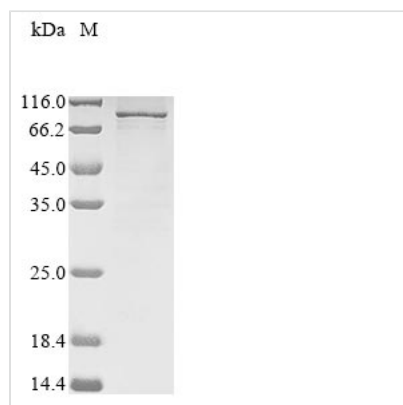




# Recombinant Human Semaphorin-3B (SEMA3B)

|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Code</b>      | CSB-BP622646HU                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Abbreviation</b>      | Recombinant Human SEMA3B protein                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Storage</b>           | The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Uniprot No.</b>       | Q13214                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Form</b>              | Liquid or Lyophilized powder                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Storage Buffer</b>    | If the delivery form is liquid, the default storage buffer is Tris/PBS-based buffer, 5%-50% glycerol. If the delivery form is lyophilized powder, the buffer before lyophilization is Tris/PBS-based buffer, 6% Trehalose.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Product Type</b>      | Recombinant Protein                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Immunogen Species</b> | Homo sapiens (Human)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Purity</b>            | Greater than 85% as determined by SDS-PAGE.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Sequence</b>          | APSPRLRLSFQELQAWHGLQTFSLERTCCYQALLVDEERGRLFVGAENHVA<br>SLNLDNISKRAKKLAWPAPVEWREECNWAGKDIGTECMNFVKLLHAYNRTHL<br>LACGTGAFHPTCAFVEVGHRAEPEVLRLDPGRIEDGKGKSPYDPRHRAASVL<br>VGEELYSGVAADLMGRDFTIFRSLGQRPSLRTEPHDSRWLNPEKFKVFWIPE<br>SENPDDDKIYFFRETAVEAAPALGRLSVSRVGQICRNDVGGQRSLVNKWTTF<br>LKARLVCSVPGVEGDTHFDQLQDVFLSSRDHRTPLLYAVFSTSSSIFQGSAY<br>CVYSMNDVRR AFLGPF AHKEGPMHQWVS YQGRVPYPRPGMCPSKTFGTFS<br>STKDFPDDVIQFARNHPLMYNSVLPTGGRPLFLQVGANYTFTQIAADRVAAD<br>GHYDVLFIGTDVGTVLKVISVPKGSRPSAEGLLLEELHVFEDSAAVTSMQISSK<br>RHQLYVASRSAVAQIALHRCAAHGRVCTECCCLARDPYCAWDGVACTRFQPSA<br>KRRFRQRDVRNGDPSTLCSGDSSRPALLEHKVFGVEGSSAFLECEPRSLQAR<br>VEWTFQRAGVTAHTQVLAERTERTARGLLLRRLRRRDSGVYLCAAVEQGFT<br>QPLRRLSLHVL SATQAERLARAEEAAPAAPP GPKLWYRDFLQLVEPGGGGSA<br>NSLRMCRPQPALQSLPLESRRKGRNRRTHAPEPRAERGPR SATHW |
| <b>Research Area</b>     | Cancer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Source</b>            | Baculovirus                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Target Names</b>      | SEMA3B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Expression Region</b> | 25-749aa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Notes</b>             | Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Tag Info</b>          | N-terminal 10xHis-tagged and C-terminal Myc-tagged                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Mol. Weight</b>       | 84.8 kDa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Protein Length</b>    | Full Length of Mature Protein                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Image</b>             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

## Description

The expression region of this recombinant Human SEMA3B covers amino acids 25-749. This SEMA3B protein is expected to have a theoretical molecular weight of 84.8 kDa. Expression of this SEMA3B protein is conducted in baculovirus. The SEMA3B gene fragment has been modified by fusing the N-terminal 10xHis tag and C-terminal Myc tag, providing convenience in detecting and purifying the recombinant SEMA3B protein during the following stages.

Human Semaphorin-3B (SEMA3B) is initially identified for its role in axon guidance during neural development. SEMA3B provides guidance cues to growing axons, influencing their pathfinding and connectivity in the developing nervous system. SEMA3B has been recognized as a tumor suppressor gene. Its expression is often downregulated in various cancers, and its re-introduction has been shown to inhibit tumor growth and metastasis. SEMA3B has anti-angiogenic properties, which are crucial for controlling the vascularization of tumors and limiting their growth. SEMA3B has been implicated in modulating immune responses. Its expression can affect the migration and function of immune cells, contributing to the regulation of inflammation. Dysregulation of SEMA3B is associated with various diseases, including cancer. Understanding its role in both normal development and pathological conditions is essential for exploring therapeutic interventions.

## Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL. We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.

## Shelf Life

The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.