

# sCD100/Semaphorin-4D, Human Recombinant

**CATALOG #:** 7126-10 10 µg  
7126-50 50 µg

**ALTERNATE NAMES:** Semaphorin-4D, BB18, A8, GR3

**SOURCE:** CHO cells

**PURITY:** ≥ 97% by SDS-PAGE gel and HPLC analyses

**MOL. WEIGHT:** 78.9 kDa

**ENDOTOXIN LEVEL:** < 0.1 ng/µg of protein (<1EU/µg).

**FORM:** Lyophilized

**FORMULATION:** Sterile filtered through a 0.2 micron filter. Lyophilized from 10 mM Sodium Phosphate, pH 7.5.

**STORAGE CONDITIONS:** Store at -20°C. After reconstitution, aliquot and store at -20°C to -80°C. Avoid repeated freezing and thawing cycles.

**RECONSTITUTION:** Centrifuge the vial prior to opening. Reconstitute 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:** The Semaphorins are a large family of phylogenetically conserved proteins that play a pivotal role in maintaining homeostasis in the immune system. Twenty members of this family have been identified and categorized into eight subclasses based on sequence similarity and distinctive structural features. CD100, also known as Sema4D, is a 150 kDa transmembrane class IV semaphorin. Studies have shown that CD100 can induce monocyte migration, T-cell activation, and B-cell survival, as well as T/B cell and T/DC "cooperation". The CD100 precursor contains 862 amino acids, including a 21 aa. signal sequence, a 713 aa. extracellular domain, a 21 aa transmembrane sequence, and a 107

aa cytoplasmic region. The extracellular sequence contains several structural features, including a 479 aa "sema" domain, a 79 aa. Ig-like sequence, and a 52 aa "Plexin-type repeat". Recombinant soluble CD100 is a 78.9 kDa protein comprising the extracellular domain of CD100 (711 amino acids). SDS-PAGE analysis run under non-reducing conditions shows a mixture of disulfide linked dimer and monomer.

**BIOLOGICAL ACTIVITY:** Measured by its ability to inhibit chemokine (hMCP-3) induced human monocyte migration.

**AMINO ACID SEQUENCE:**  
 FAPIPRITWE HREVHLVQFH EPDIYNYSAL LLEDKDTLY IGAREAVFAV NALNISEKQH  
 EVYWKVSEDK KAKCAEKGKS KQTECLNYIR VLQPLSATS L YVCGTNAFQP  
 ACDHLNLTFS KFLGKNEDGK GRCPFDPAHS YTSVMVDGEL YSGTSYNFLG  
 SEPIISRNSS HSPLRTEYAI PWLNPSFVF ADVIRKSPDS PDGEDDRVYF  
 FFTEVSVEYE FVFRVLIPRI ARVCKGDQGG LRTLQKKWTS FLKARLICS R  
 PDSGLVFNVL RDVFLRSPG LKVPVFYALF TPQLNNVGLS AVCAYNLSTA  
 EEVFSHGKYM QSTTVEQSHT KWVRYNGPVP KPRPGACIDS EARAANYTSS  
 LNLDPKTLQF VKDHPLMDDS VTPIDNRPR L IKKDVNYTQI VVDRTQALDG  
 TVYDVMFVST DRGALHKAIS LEHAVHIII E TQLFQDFEPV QTLSSSKKG  
 NRFVYAGSNS GVVQAPLAF C GKHGTCEDCV LARDPYCAWS PPTATCVALH  
 QTESPSRGLI QEMSGDASVC PDKSKGSYRQ HFFKHGGTAE LKCSQKSNLA  
 RVFWKFQNGV LKAESPKYGL MGRKNLLIFN LSEGD SGVYQ CLSEERVKNK  
 TVFQVAKHV LEVKVVPKPV VAPTLSVVQT EGSRIATKVL VASTQGSSPP  
 TPAVQATSSG AITLPPKPAP TGTSCEPKIV INTVPQLHSE KTYMLKSSDN R

- RELATED PRODUCTS:**
- CD100 Antibody (Clone A8) (Cat. No. 6278-100)
  - CD100 Alexa Fluor® 647 Antibody (Clone A8) (Cat. No. 6279-25)
  - CD100 Alexa Fluor® 488 Antibody (Clone A8) (Cat. No. 6280-25)
  - sCD14, Human Recombinant (Cat. No. 7122-10, -50)
  - sCD22, Human Recombinant (Cat. No. 7123-10, -50)
  - sCD23, Human Recombinant (Cat. No. 7124-10, -50)
  - BLCAM Antibody (Cat. No. 3363-100)
  - HCAM Antibody (Cat. No. 3393-100)
  - CD-14, human recombinant (Cat. No. 4937-100)
  - CD-14, mouse recombinant (Cat. No. 4938-100)
  - CD-14 Antibody (Clone biG 10) (Cat. No. 3676-100)

**FOR RESEARCH USE ONLY! Not to be used in humans.**