sCD100 Human Chinese Hamster Ovary Cells (CHO)

Product Data Sheet

Type: Recombinant
Source: Chinese Hamster Ovary Cells (CHO)
Species: Human
Other names: Semaphorin-4D, BB18, A8, GR3

Cat. No.:

RBG10102005	(5 µg)
RBG10102020	(20 µg)
RBG10102100	(100 µg)

Description

The Semphorins 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 a.a. signal sequence, a 713 a.a. extracellular domain, a 21 a.a. transmembrane sequence, and a 107 a.a. cytoplasmic region. The extracellular sequence contains several structural features, including a 479 a.a. “sema” domain, a 79 a.a. Ig-like sequence, and a 52 a.a. “Plexin-type repeat”. Recombinant Human 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.

Research topic

Chemokines, Cytokines and chemokines and related molecules, Immune Response, Infection and Inflammation

Amino Acid Sequence

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FAPIPRITWE HREVHLVQFH EPDIYNYSAL LLSEDKDTLY IGAREAVFAV NALNISEKQH EVYWKVSEDK KAKCAEKGKS
KQTECLNYIR VLQPLSATSL YVCGTNAFQP ACDHLNLTSF KFLGKNEDGK GRCPFDPAHS YTSVMVDGEL YSGTSYNFLG
SEPIISRNSS HSPLRTEYAI PWLNEPSFVF ADVIRKSPDS PDGEDDRVYF FFTEVSVEYE FVFRVLIPRI ARVCKGDQGG
LRTLQKKWTS FLKARLICSR PDSGLVFNVL RDVFVLRSPG LKVPVFYALF TPQLNNVGLS AVCAYNLSTA EEVFSHGKYM
QSTTVEQSHT KWVRYNGPVP KPRPGACIDS EARAANYTSS LNLPDKTLQF VKDHPLMDDS VTPIDNRPRL IKKDVNYTQI
VVDRTQALDG TVYDVMFVST DRGALHKAIS LEHAVHIIEE TQLFQDFEPV QTLLLSSKKG NRFVYAGSNS GVVQAPLAFC
GKHGTCEDCV LARDPYCAWS PPTATCVALH QTESPSRGLI QEMSGDASVC PDKSKGSYRQ HFFKHGGTAE LKCSQKSNLA
RVFWKFQNGV LKAESPKYGL MGRKNLLIFN LSEGDSGVYQ CLSEERVKNK TVFQVVAKHV LEVKVVPKPV VAPTLSVVQT
EGSRIATKVL VASTQGSSPP TPAVQATSSG AITLPPKPAP TGTSCEPKIV INTVPQLHSE KTMYLKSSDN R
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Source

Chinese Hamster Ovary Cells (CHO)

Purity

97%

Biological Activity

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

Endotoxin

Endotoxin level is <0.1 ng/µg of protein (<1EU/µg).

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

Storage, Stability/Shelf Life

-20°C

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