

TECHNICAL DATA SHEET

Recombinant Human sCD100 (Sema4D) (Carrier-free)

Catalog Number: 21-7144

RPx-Pro™ Recombinant Protein
PRODUCT INFORMATION

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Recombinant Human sCD100 (Sema4D) (Carrier-free)

DESCRIPTION

CD100, also known as Sema4D, is a transmembrane protein belonging to the Class IV subfamily of Semaphorins. CD100 is active as a homodimer, however cleavage by certain metalloproteinases produce a soluble dimer that is also active. It is expressed on T and B cells, as well as macrophages, and with upregulated expression on activated T cells. CD100 plays important roles in immune and inflammatory responses, being involved in B cell and dendritic cell activation. It also induces B cells to aggregate and may improve their viability. CD72 is one of 2 known receptors for CD100 and binding of the ligand to this receptor is reported to be an important factor in maintaining immunological homeostasis.

MOLECULAR MASS

Recombinant Human sCD100 is 711 amino acids, comprising the protein's extracellular domain. It has a molecular weight of 78.9 kDa and appears as a mix of disulfide-linked dimer and monomer when SDS-PAGE analysis is performed under non-reducing conditions.

AMINO ACID SEQUENCE

FAPIPRITWE HREVLVQFH EPDIYNYSAL LLEDKDTLY IGAREAVFAV NALNISEKQH EVYWKVSEDK KAKCAEKGKS KQTECLNYIR VLQPLSATSL YVCGTNAFQP ACDHLNLSF KFLGKNEDGK GRCPFDPAHS YTSVMVDGEL YSGTSYNFLG SEPIISRNS HSPLRTEYAI PWLNESFVF ADVIRKSPDS PDGEDDRVYF FFTEVSVEYE FVFRVLIPRI ARVCKGDQGG LRTLQKKWTS FLKARLCSR PDSGLVFNVL RDVFLRSPG LKVPVYALF TPQLNNVGLS AVCAYNLSTA EEVFSHGKYM QSTTVEQSHT KWVRYNGPVP KPRPGACIDS EARAANYTSS LNLDPDKTLQF VKDHPLMDDS VTPIDNRPRL IKKDVNYTQI VDRTRQALDG TVYDVMFVST DRGALHKAIS LEHAVHIIIE TQLFQDFEPV QTLSSSKKG NRFVYAGSNS GVVQAPLAFK GKHGTCEDCV LARDPYCAWS PPTATCVLH QTESPSRGLI QEMSGDASVC PDKSKGSYRQ HFFKHGGTAE LKCSQKSNLA RVFWKFQNGV LKAESPKYGL MGRKNLLIFN LSEGDSGVYQ CLSEERVKNK TVFQVVAKHV LEVKVVPKV VAPTLSVQT EGSRIATKVL VASTQGSSPP TPAVQATSSG AITLPPKAP TGTSCEPKIV INTVPLHSE KTMYLKSSDN R

SOURCE

CHO cells

APPLICATIONS

Bioassay

PURITY

97 %

STORAGE

-20°C

PROTEIN CONTENT

Verified by UV Spectroscopy and/or SDS-PAGE gel.

ENDOTOXIN LEVEL

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

AUTHENTICITY

Verified by N-terminal and Mass Spectrometry analyses (when applicable).

CROSS REACTIVITY

BIOACTIVITY

Inhibition of chemokine-induced (hMCP-3) mobility of human monocytes is measured.

RESEARCH AREAS

Immune System, Chemotaxis

RECONSTITUTION

See Certificate of Analysis (COA) for lot specific reconstitution information.

REFERENCES

Hall KT, Boumsell L, Schultze JL, Boussiotis VA, Dorfman DM, Cardoso AA, Bensussan A, Nadler LM and Freeman GJ. 1996. Proc Natl Acad Sci U S A. 93 (21): 11780-11785. Kumanogoh A, Shikina T, Watanabe C, Takegahara N, Suzuki K, Yamamoto M, Prasa DV, Mizui M, Toyofuku T, Tamura M, Watanabe D, Parne JR and Kikutani H. 2005. Int Immunol. 17(10): 1277-1282. Kumanogoh A and Kikutani H. 2001. Trends Immunol. 22(12): 670-676. Nkyimbeng-Takwi E and Chapoval SP. 2012. Immunol Res. 50(1): 10-21.

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