sDLL-1 Human HEK293 cells

Product Data Sheet

Type: Recombinant
Source: HEK293 cells
Species: Human
Other names: Delta-like protein 1, Delta-1

Cat. No.:

RBG10113005	(5 µg)
RBG10113025	(25 µg)
RBG10113100	(100 µg)

Description

Human soluble DLL-1 comprises the extracellular signaling domain of DLL-1, a member of the Delta/Serrate/Lag-2 (DSL) family of single-pass type I trans-membrane proteins that serve as ligands for Notch receptors. It is expressed primarily in the heart, pancreas and epidermis. DLL-1 functions to specifically activate the Notch-1 and Notch-2 receptors. Proteolytic cleavage of DLL-1 produces a secreted extracellular domain, sDLL-1, that interacts with Notch receptors expressed on adjacent cells. Notch signaling plays an essential role in controlling cell fate decisions during prenatal development and postnatal stem cell renewal, and differentiation in many tissues. Human sDLL-1 blocks monocyte differentiation into macrophages, but permits differentiation into dendritic cells. In hematopoietic progenitor cells, hsDLL-1, suppresses differentiation into B-cells, while promoting differentiation into T-cells and NK cell precursors. In cell culture, human sDLL-1 has been shown to promote expansion of hematopoietic progenitor cells and suppress apoptosis by inhibiting differentiation. Overexpression of Notch receptors appears to inhibit differentiation in several mammalian cell lines, and increasing evidence suggests that Notch signaling is frequently downregulated in human malignancies. The human DLL-1 gene consists of a 528 amino acid extracellular domain with one DSL domain, eight EGF-like repeats, a 23 amino acid transmembrane domain, and a 155 amino acid cytoplasmic domain. The calculated molecular weight of Recombinant Human sDLL-1 is 56.3 kDa.

Research topic

Apoptosis, Cardiovascular disease, Coronary artery disease

Amino Acid Sequence

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SGVFELKLQE FVNKKGLLGN RNCCRGGAGP PPCACRTFFR VCLKHYQASV SPEPPCTYGS AVTPVLGVDS FSLPDGGGAD
SAFSNPIRFP FGFTWPGTFS LIIEALHTDS PDDLATENPE RLISRLATQR HLTVGEEWSQ DLHSSGRTDL KYSYRFVCDE
HYYGEGCSVF CRPRDDAFGH FTCGERGEKV CNPGWKGPYC TEPICLPGCD EQHGFCDKPG ECKCRVGWQG RYCDECIRYP
GCLHGTCQQP WQCNCQEGWG GLFCNQDLNY CTHHKPCKNG ATCTNTGQGS YTCSCRPGYT GATCELGIDE CDPSPCKNGG
SCTDLENSYS CTCPPGFYGK ICELSAMTCA DGPCFNGGRC SDSPDGGYSC RCPVGYSGFN CEKKIDYCSS SPCSNGAKCV
DLGDAYLCRC QAGFSGRHCD DNVDDCASSP CANGGTCRDG VNDFSCTCPP GYTGRNCSAP VSRCEHAPCH NGATCHERGH
RYVCECARGY GGPNCQFLLP ELPPGPAVVD LTEKLEGQGG PF
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Source

HEK293 cells

Purity

95%

Biological Activity

Determined by the dose dependent growth suppression of the human acute monocytic leukemia cell line, THP-1. sDLL-1 inhibits the proliferation in THP-1 cells using a concentration of 3.0-5.0 µg/ml.

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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