

Delta-like protein 1/DLL1 Protein, Human (HEK293, His)

Cat. No.:	HY-P7841
Synonyms:	rHuDelta-like protein 1/DLL1, His; Delta-like protein 1; Drosophila Delta homolog 1; Delta1; H-Delta-1; DLL1
Species:	Human
Source:	HEK293
Accession:	O00548 (Q18-G540)
Gene ID:	28514
Molecular Weight:	Approximately 65.0 kDa

PROPERTIES

AA Sequence

Q V W S S G V F E L	K L Q E F V N K K G	L L G N R N C C R G	G A G P P P C A C R
T F F R V C L K H Y	Q A S V S P E P P C	T Y G S A V T P V L	G V D S F S L P D G
G G A D S A F S N P	I R F P F G F T W P	G T F S L I I E A L	H T D S P D D L A T
E N P E R L I S R L	A T Q R H L T V G E	E W S Q D L H S S G	R T D L K Y S Y R F
V C D E H Y Y G E G	C S V F C R P R D D	A F G H F T C G E R	G E K V C N P G W K
G P Y C T E P I C L	P G C D E Q H G F C	D K P G E C K C R V	G W Q G R Y C D E C
I R Y P G C L H G T	C Q Q P W Q C N C Q	E G W G G L F C N Q	D L N Y C T H H K P
C K N G A T C T N T	G Q G S Y T C S C R	P G Y T G A T C E L	G I D E C D P S P C
K N G G S C T D L E	N S Y S C T C P P G	F Y G K I C E L S A	M T C A D G P C F N
G G R C S D S P D G	G Y S C R C P V G Y	S G F N C E K K I D	Y C S S S P C S N G
A K C V D L G D A Y	L C R C Q A G F S G	R H C D D N V D D C	A S S P C A N G G T
C R D G V N D F S C	T C P P G Y T G R N	C S A P V S R C E H	A P C H N G A T C H
E R G H R Y V C E C	A R G Y G G P N C Q	F L L P E L P P G P	A V V D L T E K L E
G Q G			

Appearance Lyophilized powder.

Formulation Lyophilized from a 0.2 µm filtered solution of 20 mM Hepes, 150 mM NaCl, 1 mM EDTA, pH 7.4.

Endotoxin Level <1 EU/µg, determined by LAL method.

Reconstitution It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH₂O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).

Storage & Stability Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.

Shipping Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background

Delta-like protein 1 (DLL1) functions as a transmembrane ligand protein for NOTCH1, NOTCH2, and NOTCH3 receptors, engaging in both cis and trans interactions with the extracellular domain (ECD) of Notch receptors. Upon transinteraction, ligand cells exert mechanical force through clathrin-mediated endocytosis, involving ligand ubiquitination, EPN1 interaction, and actin polymerization. These events facilitate Notch receptor extracellular domain (NECD) transendocytosis, triggering Notch signaling, including cleavage, hyperphosphorylation, and nuclear accumulation of the intracellular domain of Notch receptors (NICD). DLL1 is vital for embryonic development, maintaining adult stem cells in various tissues and the immune system. Its involvement in intercellular communication regulates cell lineage, patterning, and morphogenesis, influencing differentiation and proliferation. In brain development, DLL1 plays a role in neuronal differentiation and neocortex development, while in cerebellar development, it regulates Bergmann glial monolayer formation. It also contributes to immune system development, muscle development, pancreatic cell development, arterial identity maintenance, angiogenesis, goblet cell differentiation, inner ear development, and nephron development through the Notch signaling pathway. DLL1 functions as a homodimer and interacts with various proteins, orchestrating a diverse array of cellular processes.

Caution: Product has not been fully validated for medical applications. For research use only.

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