

DLL4 active protein

DLL4 Protein, Mouse, Recombinant (His Tag)

CATALOG #
AAA258190

HOST
HEK293 Cells

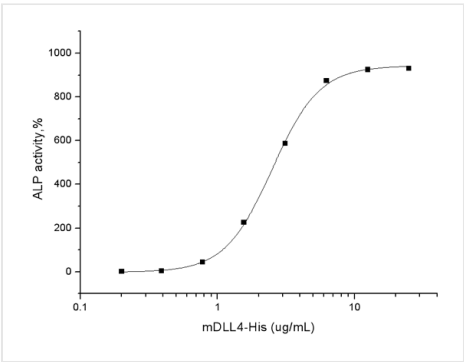
PRODUCT SYNONYMS

DLL4; DLL4 Protein; Mouse; Recombinant (His Tag); Mouse DLL4/Delta4 Protein (His Tag); Delta4 Protein; delta-like 4 (Drosophila); DLL4 active protein

PRODUCT SPECIFICATIONS

Host	HEK293 Cells
Purity/Purification	>96% as determined by SDS-PAGE
Form/Format	Lyophilized from sterile PBS, pH7.4. Normally 5%-8% trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the hard copy of CoA.
Sequence	Met1-Pro52 5
Species	Mouse
Endotoxin	<1.0EU per ug of the protein as determined by the LAL method
Predicted N Terminal	Ser 28
Tag	C-His
Protein Construction	A DNA sequence encoding the extracellular domain of mouse DLL4 (NP_062327.2)(Met 1-Pro 525) was expressed, with a C-terminal polyhistidine tag.
Reconstitution	A hardcopy of COA with reconstitution instruction is sent along with the products. Please refer to it for detailed information.
Activity	1. Measured by its binding ability in a functional ELISA. Immobilized mouse DLL4-his at 10ug/mL (100uL/well) can bind biotinylated mouse NOTCH1-his. The EC50 of biotinylated mouse NOTCH1-his is 30ng/mL. 2. Measured by the ability of the immobilized protein to enhance BMP2-induced alkaline phosphatase activity in C3H10T1/2 mouse embryonic fibroblast cells. The ED50 for this effect is typically 1-5ug/mL in the presence of 500ng/mL recombinant human BMP2.
Preparation and Storage	Samples are stable for up to twelve months from date of receipt at -20 degree C to -80 degree C. Store it under sterile conditions at -20 degree C to -80 degree C. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles. In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice.

IMAGES



SDS-PAGE

Application Data

Measured by the ability of the immobilized protein to enhance BMP2-induced alkaline phosphatase activity in C3H10T1/2 mouse embryonic fibroblast cells. The ED50 for this effect is typically 1-5 ug/mL in the presence of 500 ng/mL recombinant human BMP2.

ADDITIONAL INFORMATION

Related Product Information for DLL4 active protein

Background: Delta-like protein 4 (DLL4, Delta4), a type I membrane-bound Notch ligand, is one of five known Notch ligands in mammals and interacts predominantly with Notch 1, which has a key role in vascular development. Recent studies yield substantial insights into the role of DLL4 in angiogenesis. DLL4 is induced by vascular endothelial growth factor (VEGF) and acts downstream of VEGF as a 'brake' on VEGF-induced vessel growth, forming an autoregulatory negative feedback loop inactivating VEGF. DLL4 is downstream of VEGF signaling and its activation triggers a negative feedback that restrains the effects of VEGF. Attenuation of DLL4/Notch signaling results in chaotic vascular network with excessive branching and sprouting. DLL4 is widely distributed in tissues other than vessels including many malignancies. Furthermore, the molecule is internalized on binding its receptor and often transported to the nucleus. In pathological conditions, such as cancer, DLL4 is up-regulated strongly in the tumour vasculature. Blockade of DLL4-mediated Notch signaling strikingly increases nonproductive angiogenesis, but significantly inhibits tumor growth in preclinical mouse models. In preclinical studies, blocking of DLL4/Notch signaling is associated with a paradoxical increase in tumor vessel density, yet causes marked growth inhibition due to functionally defective vasculature. Thus, DLL4 blockade holds promise as an additional strategy for angiogenesis-based cancer therapy.

Product Categories/Family for DLL4 active protein

Cancer Drug Targets Notch Pathway

References

Yan M, et al. (2007) Delta-like 4/Notch signaling and its therapeutic implications. Clin Cancer Res. 13(24): 7243-6.Sainson RC, et al. (2007) Anti-Dll4 therapy: can we block tumour growth by increasing angiogenesis Trends Mol Med. 13(9): 389-95.Martinez JC, et al. (2009) Nuclear and membrane expression of the angiogenesis regulator delta-like ligand 4 (DLL4) in normal and malignant human tissues. Histopathology. 54(5): 598-606.Li JL, et al. (2010) Targeting DLL4 in tumors shows preclinical activity but potentially significant toxicity. Future Oncol. 6(7): 1099-103.

NCBI AND UNIPROT INFORMATION

NCBI GI #	244799228
NCBI GeneID	54485
NCBI Accession #	NP_062327.2
NCBI GenBank Nucleotide #	NM_019454.3
UniProt Accession #	Q9JH71; Q9DBU9; Q9JHZ7
Molecular Weight	74,991 Da
NCBI Official Full Name	delta-like protein 4
NCBI Official Synonym Full Names	delta-like 4 (Drosophila)
NCBI Official Symbol	Dll4

NCBI Official Synonym Symbols	Delta4
NCBI Protein Information	delta-like protein 4
UniProt Protein Name	Delta-like protein 4
UniProt Gene Name	DLL4
UniProt Synonym Gene Names	Delta4
UniProt Entry Name	DLL4_MOUSE

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://www.aaabiotech.com/hek293-active-protein/dll4/258190>