Active Recombinant Rhesus DLL4 Protein (Met1-Pro528), His-tagged

Cat. No. DLL4-1021R **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Rhesus DLL4 Protein (XP_001099250.1) (Met1-Pro528) was produced by HEK293 Cells expression system. This protein was expressed with a polyhistidine tag at the C-terminus.
Species	Rhesus macaque
Source	HEK293
ProteinLength	Met1-Pro528
Description	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

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	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.
Predicted N Terminal	Ser 27
Form	Lyophilized from sterile 20 mM Tris, 150 mM NaCl, 5 % Glycerol, pH 8.0. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization.
Bio-activity	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 μg/mL in the presence of 500 ng/mL recombinant human BMP2.
Molecular Mass	The recombinant rhesus DLL4 consists of 513 amino acids and predicts a molecular mass of 56.1 kDa.
Endotoxin	< 1.0 EU per μg protein as determined by the LAL method.
Purity	> 95 % as determined by SDS-PAGE.
Stability	Samples are stable for up to twelve months from date of receipt at -70 centigrade.
Storage	Store it under sterile conditions at -20 centigrade to -80 centigrade. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.

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Reconstitution	It is recommended that sterile water be added to the vial to prepare a stock solution of 0.2 mg/ml. Centrifuge the vial at 4℃ before opening to recover the entire contents.
Shipping	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 unless customers require otherwise.

GENE INFORMATION

Gene Name	DLL4 delta like canonical Notch ligand 4 [Macaca mulatta (Rhesus monkey)]
Official Symbol	DLL4
Gene ID	704898
mRNA Refseq	XM_001099250
Protein Refseq	XP_001099250
UniProt ID	F7G756

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