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Anti-DLL1 Antibody
Catalog # ABO11215

Specification

Anti-DLL1 Antibody - Product Information

Application	**WB**
Primary Accession	O00548
Host	**Rabbit**
Reactivity	**Human, Mouse, Rat**
Clonality	**Polyclonal**
Format	**Lyophilized**

Description
Rabbit IgG polyclonal antibody for Delta-like protein 1(DLL1) detection. Tested with WB in Human;Mouse;Rat.

Reconstitution
Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-DLL1 Antibody - Additional Information

Gene ID 28514

Other Names
Delta-like protein 1, Drosophila Delta homolog 1, Delta1, H-Delta-1, DLL1

Calculated MW
78056 MW KDa

Application Details
Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat

Subcellular Localization
Membrane; Single-pass type I membrane protein.

Tissue Specificity
Expressed in heart and pancreas, with lower expression in brain and muscle and almost no expression in placenta, lung, liver and kidney.

Protein Name
Delta-like protein 1

Contents
Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.

Immunogen
A synthetic peptide corresponding to a sequence at the N-terminus of human DLL1(168-184aa RTDLKYSYRFVCDEHYY), different from the related rat and mouse sequences by one amino acid.

Purification

Immunogen affinity purified.

Cross Reactivity
No cross reactivity with other proteins

Storage

At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.

Sequence Similarities
Contains 1 DSL domain.

Anti-DLL1 Antibody - Protein Information

Name DLL1 (HGNC:2908)

Function
Transmembrane ligand protein of NOTCH1, NOTCH2 and NOTCH3 receptors that binds the extracellular domain (ECD) of Notch receptor in a cis and trans fashion manner (PubMed:11006133). Following transinteraction, ligand cells produce mechanical force that depends of a clathrin-mediated endocytosis, requiring ligand ubiquitination, EPN1 interaction, and actin polymerisation; these events promote Notch receptor extracellular domain (NECD) transendocytosis and triggers Notch signaling through induction of cleavage, hyperphosphorylation, and nuclear accumulation of the intracellular domain of Notch receptors (NICD) (By similarity). Is required for embryonic development and maintenance of adult stem cells in many different tissues and immune systeme; the DLL1-induced Notch signaling is mediated through an intercellular communication that regulates cell lineage, cell specification, cell patterning and morphogenesis through effects on differentiation and proliferation (PubMed:11581320). Plays a role in brain development at different level, namely by regulating neuronal differentiation of neural precursor cells via cell-cell interaction, most likely through the lateral inhibitory system in an endogenous level dependent-manner. During neocortex development, Dll1-Notch signaling transmission is mediated by dynamic interactions between intermediate neurogenic progenitors and radial glia; the cell-cell interactions are mediated via dynamic and transient elongation processes, likely to reactivate/maintain Notch activity in neighboring progenitors, and coordinate progenitor cell division and differentiation across radial and zonal boundaries. During cerebellar development, regulates Bergmann glial monolayer formation and its morphological maturation through a Notch signaling pathway. At the retina and spinal cord level, regulates neurogenesis by preventing the premature differentiation of neural progenitors and also by maintaining progenitors in spinal cord through Notch signaling pathway. Also controls neurogenesis of the neural tube in a progenitor domain- specific fashion along the dorsoventral axis. Maintains quiescence of neural stem cells and plays a role as a fate determinant that segregates asymmetrically to one daughter cell during neural stem cells mitosis, resulting in neuronal differentiation in Dll1-inheriting cell. Plays a role in immune systeme development, namely the development of all T-cells and marginal zone (MZ) B-cells (By similarity). Blocks the differentiation of progenitor cells into the B-cell lineage while promoting the emergence of a population of cells with the characteristics of a T-cell/NK-cell precursor (PubMed:11581320). Also plays a role during muscle development. During early development, inhibits myoblasts differentiation from the medial dermomyotomal lip and later regulates progenitor cell differentiation. Directly modulates cell adhesion and basal lamina formation in satellite cells through Notch signaling. Maintains myogenic progenitors pool by suppressing differentiation through down-regulation of MYOD1 and is required for satellite cell homing and PAX7 expression. During craniofacial and trunk myogenesis suppresses differentiation of cranial mesoderm-derived and somite-derived muscle

via MYOD1 regulation but in cranial mesoderm- derived progenitors, is neither required for satellite cell homing nor for PAX7 expression. Also plays a role during pancreatic cell development. During type B pancreatic cell development, may be involved in the initiation of proximodistal patterning in the early pancreatic epithelium. Stimulates multipotent pancreatic progenitor cells proliferation and pancreatic growth by maintaining HES1 expression and PTF1A protein levels. During fetal stages of development, is required to maintain arterial identity and the responsiveness of arterial endothelial cells for VEGFA through regulation of KDR activation and NRP1 expression. Controls sprouting angiogenesis and subsequent vertical branch formation through regulation on tip cell differentiation. Negatively regulates goblet cell differentiation in intestine and controls secretory fat commitment through lateral inhibition in small intestine. Plays a role during inner ear development; negatively regulates auditory hair cell differentiation. Plays a role during nephron development through Notch signaling pathway. Regulates growth, blood pressure and energy homeostasis (By similarity).

Cellular Location
Apical cell membrane {ECO:0000250|UniProtKB:Q61483}; Single-pass type I membrane protein {ECO:0000250|UniProtKB:Q61483}. Cell junction, adherens junction {ECO:0000250|UniProtKB:Q61483}. Membrane raft {ECO:0000250|UniProtKB:Q61483}. Note=Distributed around adherens junction in the apical endfeet through interactions with MAGI1 {ECO:0000250|UniProtKB:Q61483}

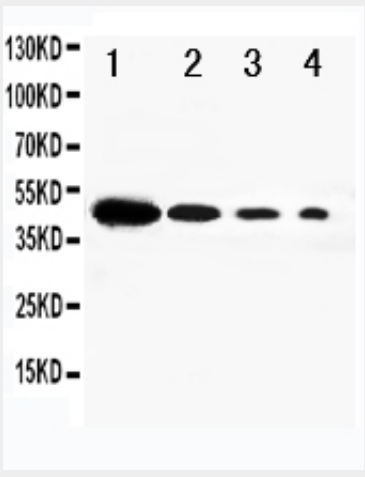
Tissue Location
Expressed in heart and pancreas, with lower expression in brain and muscle and almost no expression in placenta, lung, liver and kidney

Anti-DLL1 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-DLL1 Antibody - Images



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Anti-DLL1 antibody, ABO11215, Western blottingRecombinant Protein Detection Source: E.coli derived -recombinant human DLL1, 39.9KD(162aa tag+M1-G200)Lane 1: Recombinant Human DLL1 Protein 10ngLane 2: Recombinant Human DLL1 Protein 5ngLane 3: Recombinant Human DLL1 Protein 2.5ngLane 4: Recombinant Human DLL1 Protein 1.25ng

Anti-DLL1 Antibody - Background

DLL1(DELTA-LIKE 1) also known as DL1 or DELTA1, is a protein that in humans is encoded by the DLL1 gene. DLL1 is a human homolog of the Notch Delta ligand and is a member of the delta/serrate/jagged family. It plays a role in mediating cell fate decisions during hematopoiesis. It may play a role in cell-to-cell communication. Using FISH, Gray et al.(1999) mapped the DLL1 gene to chromosome 6q27, near a locus for type I diabetes. Functional analysis by Han et al.(2000) suggested that a soluble fusion protein containing the DSL domain of DLL1 and its adjacent 50 N-terminal amino acids increased the viability of hemopoietic cells but inhibited cell death. Jaleco et al.(2001) used a cell coculture assay to show that DLL1 blocks the differentiation of progenitor cells into the B-cell lineage while promoting the emergence of a population of cells with the characteristics of a T-cell/NK-cell precursor. In contrast, JAG1 did not disturb either B-cell or T-cell/NK-cell development. Galceran et al. found that mouse Lef1 bound multiple sites in the Dll1 promoter in vitro and in vivo, and mutation of the Lef1 sites impaired expression of a reporter transgene in the presomitic mesoderm of embryonic mice.