

Anti-Mouse DELTA-1 (RABBIT) Antibody
DELTA-1 Antibody
Catalog # ASR5300

Specification

Anti-Mouse DELTA-1 (RABBIT) Antibody - Product Information

Host	Rabbit
Conjugate	Unconjugated
Target Species	Mouse
Reactivity	Mouse
Clonality	Polyclonal
Application	WB, IHC, E, I, LCI
Application Note	Anti-DELTA-1 Antibody has been tested for use in ELISA against the immunizing peptide, western blot, and in IHC. Reactivity in other immunoassays is unknown.
Physical State	Liquid (sterile filtered)
Buffer	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Immunogen	This affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to an internal region near amino acids 150-175 of Mouse DELTA-1. Swiss Prot accession Q61483.
Preservative	0.01% (w/v) Sodium Azide

Anti-Mouse DELTA-1 (RABBIT) Antibody - Additional Information

Gene ID 13388

Other Names
13388

Purity

Anti-DELTA-1 Antibody was affinity purified antibody produced by immunoaffinity chromatography using the immunizing peptide after immobilization to a solid phase. The antibody detects DELTA-1 from mouse. Activity against Delta-1 from other species has not been determined but is expected based on sequence homology. Expected to cross-react with rat, human and chicken.

Storage Condition

Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

Precautions Note

This product is for research use only and is not intended for therapeutic or diagnostic applications.

Anti-Mouse DELTA-1 (RABBIT) Antibody - Protein Information

Name Dll1

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: 10958687, PubMed: 21985982). 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) (PubMed: 10958687, PubMed: 18676613). Is required for embryonic development and maintenance of adult stem cells in many different tissues and immune system; 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: 16495313, PubMed: 17194759, PubMed: 17960184, PubMed: 18997111, PubMed: 19144989, PubMed: 19389377, PubMed: 19562077, PubMed: 20081190, PubMed: 21238454, PubMed: 21572390, PubMed: 22096075, PubMed: 22282195, PubMed: 22529374, PubMed: 22940113, PubMed: 23688253, PubMed: 23695674, PubMed: 23699523, PubMed: 23806616, PubMed: 25220152, PubMed: 26114479, PubMed: 7671806). 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 (PubMed: 18997111, PubMed: 7671806). 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 (PubMed: 23699523). During cerebellar development, regulates Bergmann glial monolayer formation and its morphological maturation through a Notch signaling pathway (PubMed: 23688253). 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 (PubMed: [19389377](http://www.uniprot.org/citations/19389377), PubMed: [26114479](http://www.uniprot.org/citations/26114479)). Also controls neurogenesis of the neural tube in a progenitor domain-specific fashion along the dorsoventral axis (PubMed: [20081190](http://www.uniprot.org/citations/20081190)). 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 (PubMed: [23695674](http://www.uniprot.org/citations/23695674)). Plays a role in immune system development, namely the development of all T-cells and marginal zone (MZ) B cells (PubMed: [15146182](http://www.uniprot.org/citations/15146182), PubMed: [19217325](http://www.uniprot.org/citations/19217325)). 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 (By similarity). Upon MMP14 cleavage, negatively regulates Notch signaling in haematopoietic progenitor cells to specifically maintain normal B-cell development in bone marrow (PubMed: [21572390](http://www.uniprot.org/citations/21572390)). Also plays a role during muscle development. During early development, inhibits myoblasts differentiation from the medial dermomyotomal lip and later regulates progenitor cell differentiation (PubMed: [17194759](http://www.uniprot.org/citations/17194759)). 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 (PubMed: [22940113](http://www.uniprot.org/citations/22940113)). 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 (PubMed: [25220152](http://www.uniprot.org/citations/25220152)). 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 (PubMed: [22529374](http://www.uniprot.org/citations/22529374)). Stimulates multipotent pancreatic progenitor cells proliferation and pancreatic growth by maintaining HES1 expression and PTF1A protein levels (PubMed: [22096075](http://www.uniprot.org/citations/22096075)). 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 (PubMed: [19144989](http://www.uniprot.org/citations/19144989)). Controls sprouting angiogenesis and subsequent vertical branch formation through regulation on tip cell differentiation (PubMed: [22282195](http://www.uniprot.org/citations/22282195)). Negatively regulates goblet cell differentiation in intestine and controls secretory fat commitment through lateral inhibition in small intestine (PubMed: [21238454](http://www.uniprot.org/citations/21238454), PubMed: [21915337](http://www.uniprot.org/citations/21915337)). Plays a role during inner ear development; negatively regulates auditory hair cell differentiation (PubMed: [16495313](http://www.uniprot.org/citations/16495313)). Plays a role during nephron development through Notch signaling pathway (PubMed: [23806616](http://www.uniprot.org/citations/23806616)). Regulates growth, blood pressure and energy homeostasis (PubMed: [19562077](http://www.uniprot.org/citations/19562077)).

Cellular Location

Apical cell membrane; Single-pass type I membrane protein. Cell junction, adherens junction. Membrane raft Note=Distributed around adherens junction in the apical endfeet through interactions with MAGI1. [Dll1-intracellular form]: Nucleus

Tissue Location

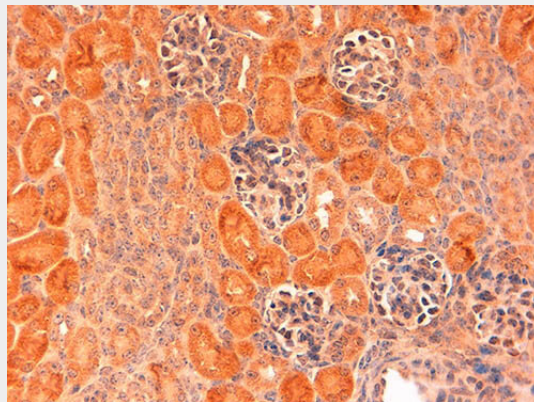
In the embryo, expressed in the paraxial mesoderm and nervous system. Expressed at high levels in adult heart and at lower levels, in adult lung. Highly expressed in satellite cells from masseter and tongue than in satellite cells from leg and extraocular muscle.? (PubMed:25220152).

Anti-Mouse DELTA-1 (RABBIT) 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 Cytometry](#)
- [Cell Culture](#)

Anti-Mouse DELTA-1 (RABBIT) Antibody - Images



Immunohistochemistry of Rabbit Anti-Delta1 antibody. Tissue: Mouse embryonic kidney. Fixation: formalin fixed paraffin embedded 10% conc. Antigen retrieval: pH 9.5. Primary antibody: 2ug/ml for 1.5 hour @ room Temp. Secondary antibody: Peroxidase secondary reagent for 45 min at RT. Localization: as shown. Staining: 3,3'-diaminobenzidine tetrahydrochloride was used as the chromogen. Nuclei were counterstained purple with hematoxylin.

Anti-Mouse DELTA-1 (RABBIT) Antibody - Background

Delta-like protein 1 is a protein that in humans is encoded by the DLL1 gene. The Notch signaling pathway has pleiotropic functions during mammalian embryogenesis. It is required for the patterning and differentiation of the presomitic and somitic paraxial mesoderm and of the neural tube. DELTA-1 is a mouse 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. Anti-Delta-like protein 1 antibody would be suitable for researchers in Cell Biology and Signal Transduction.