ARG23664
anti-DLL1 antibody [HMD1-5]

Package: 100 µg
Store at: -20°C

Summary

Product Description	Hamster Monoclonal antibody [HMD1-5] recognizes DLL1. This product specifically recognizes Delta-like protein 1 (DLL1), one of the five major ligands of the Notch signaling pathway, which is activated through the binding of specific ligands to the Notch receptors Notch 1-4.The Notch signaling pathway is an evolutionarily conserved pathway in multi-cellular organisms, which is vital for cell-cell communication, important during fundamental developmental and physiological processes, including regulation of cell fate decisions during neuronal, cardiac and endocrine development, stem cell hematopoiesis, thymic T-cell development, and both tumor progression and suppression. Ligation of Notch receptors by their specific ligands, Jagged1 (CD339), Jagged2, Delta-like protein 1 (DLL1), DLL3 and DLL4, on physically adjacent signal receiving cells, induces proteolysis of the receptors by ADAM-family metalloproteases and the gamma-secretase complex, within the transmembrane domain, releasing the Notch intracellular domain (NICD) to translocate to the nucleus. Subsequent signal transduction then occurs through either the CSL-NICD-Mastermind complex cascade (canonical pathway), or NF-kappaB-NICD and CSL-NICD-Deltex complex signaling cascades (non-canonical pathway). The canonical pathway inhibits the differentiation of stem cells or progenitor cells, whilst the non-canonical pathway promotes differentiation. DLL1 is widely expressed, and acts as a mediator of cell fate decisions during hematopoiesis, and may play a role in cell-to-cell communication in mammalian embryos. DLL1 plays an important role in B and T cell differentiation, in embryonic somite formation and patterning, and associates with the scaffolding protein MAGI1 at adherens junctions on neuronal processes. Signaling through DLL1 and Notch 2 has been implicated in the development of marginal zone B cells (MZB). Hamster anti Mouse Delta-Like Protein 1 antibody, clone HMD1-5 blocks binding of Notch2 to Dll1 (Moriyama et al. 2008)
Tested Reactivity	Ms, Rat
Tested Application	FACS, FuncSt, IHC-Fr
Host	Hamster
Clonality	Monoclonal
Clone	HMD1-5
Isotype	IgG
Target Name	DLL1
Species	Mouse
Immunogen	DLL1-expressing CHO cells.
Conjugation	Un-conjugated
Alternate Names	DELTA1; H-Delta-1; Drosophila Delta homolog 1; Delta-like protein 1; DL1; Delta1; Delta

Application Instructions

Application table

Application	Dilution
FACS	Assay-dependent
FuncSt	Assay-dependent
IHC-Fr	Assay-dependent

Application Note: Functional studies: This product contains sodium azide, removal by dialysis is recommended prior to use in functional assays.

FACS: Use 10 µl of the suggested working dilution to label 10^6 cells in 100 µl.
* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

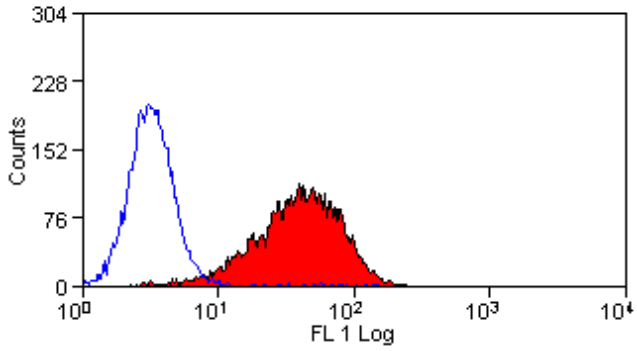
Properties

Form	Liquid
Purification	Purification with Protein G.
Buffer	PBS and 0.09% Sodium azide.
Preservative	0.09% Sodium azide
Concentration	1 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

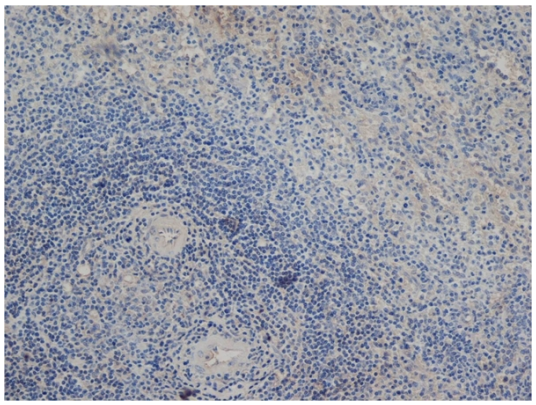
Gene Symbol	DLL1
Gene Full Name	delta-like 1 (Drosophila)
Background	DLL1 is a human homolog of the Notch Delta ligand and is a member of the delta/serrate/jagged family. It plays a role in mediating cell fate decisions during hematopoiesis. It may play a role in cell-to-cell communication. [provided by RefSeq, Jul 2008]
Function	Acts as a ligand for Notch receptors. 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. [UniProt]
Calculated Mw	78 kDa
PTM	Ubiquitinated by MIB (MIB1 or MIB2), leading to its endocytosis and subsequent degradation (By similarity). Ubiquitinated; promotes recycling back to the plasma membrane and confers a strong affinity for NOTCH1. Multi-ubiquitination of LYS-613 by MIB1 promotes both cis and trans-interaction with NOTCH1, as well as activation of Notch signaling. Ubiquitinated by NEURL1B (By similarity). Phosphorylated in a membrane association-dependent manner. Phosphorylation at Ser-697 requires the presence of Ser-694, whereas phosphorylation at Ser-694 occurs independently of the other site. Phosphorylation is required for full ligand activity in vitro and affects surface presentation, ectodomain shedding, and endocytosis. O-fucosylated. Can be elongated to a disaccharide by MFNG. [UniProt]

Images



ARG23664 anti-DLL1 antibody [HMD1-5] FACS image

Flow Cytometry: Mouse Delta like protein 1 transfected cells stained with ARG23664 anti-DLL1 antibody [HMD1-5].



ARG23664 anti-DLL1 antibody [HMD1-5] IHC-P image

Immunohistochemistry: Paraffin-embedded Human spleen stained with ARG23664 anti-DLL1 antibody [HMD1-5] followed by Goat anti-Hamster IgG (HRP).