Datasheet: MCA5705GA

BATCH NUMBER 163064

Description:	HAMSTER ANTI MOUSE DELTA-LIKE PROTEIN 1
Specificity:	DELTA-LIKE PROTEIN 1
Other names:	DLL1
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	HMD1-5
Isotype:	IgG
Quantity:	0.1 mg

Product Details

Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit www.bio-rad-antibodies.com/protocols.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	▪			
Immunohistology - Frozen	▪			
Immunohistology - Paraffin			▪	
ELISA			▪	
Immunoprecipitation			▪	
Western Blotting			▪	
Functional Assays (1)	▪			

Where this product has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the product for use in their own system using appropriate negative/positive controls.

(1) **This product contains sodium azide, removal by dialysis is recommended prior to use in functional assays.**

Target Species

Mouse

Species Cross Reactivity

Reacts with: Rat

Reacts weakly with:Human

N.B. Antibody reactivity and working conditions may vary between species. Cross reactivity is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information.

Product Form	Purified IgG - liquid
Preparation	Purified IgG prepared by affinity chromatography on Protein G
Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	0.09% Sodium Azide (NaN_3)
Approx. Protein Concentrations	IgG concentration 1.0mg/ml
Immunogen	DLL1-expressing CHO cells.
External Database Links	**UniProt:** Q61483 Related reagents P97677 Related reagents O00548 Related reagents **Entrez Gene:** 13388 Dll1 Related reagents 84010 Dll1 Related reagents 28514 DLL1 Related reagents
RRID	AB_10707934
Fusion Partners	Spleen cells from immunised Armenian hamsters were fused with cells of the P3U1 myeloma cell line.
Specificity	**Hamster anti Mouse Delta-Like Protein 1 antibody, clone HMD1-5** 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)
Flow Cytometry	Use 10ul of the suggested working dilution to label $1x10^6$ cells in 100ul.
Histology Positive Control Tissue	Mouse spleen
References	1. Moriyama, Y. *et al.* (2008) Delta-like 1 is essential for the maintenance of marginal zone B cells in normal mice but not in autoimmune mice. Int Immunol. 20 (6): 763-73. 2. Sekine, C. *et al.* (2009) Differential regulation of splenic CD8- dendritic cells and marginal zone B cells by Notch ligands. Int Immunol. 21 (3): 295-301. 3. Sekine, C. *et al.* (2012) Differential regulation of osteoclastogenesis by Notch2/Delta-like 1 and Notch1/Jagged1 axes. Arthritis Res Ther. 14: R45.
Further Reading	1. Bray, S.J. (2006) Notch signalling: a simple pathway becomes complex. Nat Rev Mol Cell Biol. 7 (9): 678-89. 2. Iso, T. *et al.* (2003) Notch signaling in vascular development. Arterioscler Thromb Vasc Biol. 23 (4): 543-53. 3. Hu, X. *et al.* (2008) Integrated regulation of Toll-like receptor responses by Notch and interferon-gamma pathways. Immunity. 29 (5): 691-703. 4. Hoyne, G.F. *et al.* (2001) Notch signalling in the regulation of peripheral immunity. Immunol Rev. 182: 215-27.
Storage	This product is shipped at ambient temperature. It is recommended to aliquot and store at -20°C on receipt. When thawed, aliquot the sample as needed. Keep aliquots at 2-8°C for short term use (up to 4 weeks) and store the remaining aliquots at -20°C. Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended.
Guarantee	12 months from date of despatch
Health And Safety Information	Material Safety Datasheet documentation #10040 available at: https://www.bio-rad-antibodies.com/SDS/MCA5705GA 10040
Regulatory	For research purposes only

Related Products

Recommended Secondary Antibodies

Goat Anti Hamster IgG (STAR104...)	DyLight®550, DyLight®650, DyLight®800, FITC
Goat Anti Hamster IgG (STAR79...)	Biotin, FITC, HRP

Recommended Negative Controls

HAMSTER (ARMENIAN) IgG NEGATIVE CONTROL (MCA2356)

North & South America	Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: antibody_sales_us@bio-rad.com	**Worldwide**	Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: antibody_sales_uk@bio-rad.com	**Europe**	Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: antibody_sales_de@bio-rad.com

To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets

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