

Datasheet: MCA5705PE

Description:	HAMSTER ANTI MOUSE DELTA-LIKE PROTEIN 1:RPE
Specificity:	DELTA-LIKE PROTEIN 1
Other names:	DLL1
Format:	RPE
Product Type:	Monoclonal Antibody
Clone:	HMD1-5
Isotype:	IgG
Quantity:	100 TESTS

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	■			

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.

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 conjugated to R. Phycoerythrin (RPE) - lyophilized

Reconstitution

Reconstitute with 1.0ml distilled water

Max Ex/Em

Fluorophore	Excitation Max (nm)	Emission Max (nm)
RPE 488nm laser	496	578

Preparation

Purified IgG prepared by affinity chromatography on Protein G from tissue culture

supernatant

Buffer Solution	Phosphate buffered saline
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Preservative Stabilisers	0.09% Sodium Azide (NaN ₃) 1% Bovine Serum Albumin 5% Sucrose
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Immunogen	DLL1-expressing CHO cells.
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External Database Links

UniProt:

Q61483	Related reagents
P97677	Related reagents
O00548	Related reagents

Entrez Gene:

13388	DII1	Related reagents
84010	DII1	Related reagents
28514	DLL1	Related reagents

RRID	AB_11152602
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Fusion Partners	Spleen cells from immunized Armenian hamsters were fused with cells of the P3U1 myeloma cell line.
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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.
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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-Deltaex 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.
References	<ol style="list-style-type: none"> 1. Sekine, C. <i>et al.</i> (2009) Differential regulation of splenic CD8- dendritic cells and marginal zone B cells by Notch ligands. Int Immunol. 21 (3): 295-301. 2. Sekine, C. <i>et al.</i> (2012) Differential regulation of osteoclastogenesis by Notch2/Delta-like 1 and Notch1/Jagged1 axes. Arthritis Res Ther. 14: R45.
Further Reading	<ol style="list-style-type: none"> 1. Hoyne, G.F. <i>et al.</i> (2001) Notch signalling in the regulation of peripheral immunity. Immunol Rev. 182: 215-27. 2. Iso, T. <i>et al.</i> (2003) Notch signaling in vascular development. Arterioscler Thromb Vasc Biol. 23 (4): 543-53. 3. Bray, S.J. (2006) Notch signalling: a simple pathway becomes complex. Nat Rev Mol Cell Biol. 7 (9): 678-89. 4. Hu, X. <i>et al.</i> (2008) Integrated regulation of Toll-like receptor responses by Notch and interferon-gamma pathways. Immunity. 29 (5): 691-703.
Storage	<p>This product is shipped at ambient temperature.</p> <p>Prior to reconstitution store at +4°C.</p> <p>After reconstitution store at +4°C.</p> <p>DO NOT FREEZE. This product should be stored undiluted. This product is photosensitive and should be protected from light. Should this product contain a precipitate we recommend microcentrifugation before use.</p>
Guarantee	12 months from date of despatch
Health And Safety Information	<p>Material Safety Datasheet documentation #20487 available at: https://www.bio-rad-antibodies.com/SDS/MCA5705PE</p> <p>20487</p>
Regulatory	For research purposes only

Related Products

Recommended Negative Controls

[HAMSTER \(ARMENIAN\) IgG NEGATIVE CONTROL:RPE \(MCA2356PE\)](#)

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

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