

Datasheet: MCA5705GA

**BATCH NUMBER 147828**

<b>Description:</b>	HAMSTER ANTI MOUSE DELTA-LIKE PROTEIN 1
<b>Specificity:</b>	DELTA-LIKE PROTEIN 1
<b>Other names:</b>	DLL1
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	HMD1-5
<b>Isotype:</b>	IgG
<b>Quantity:</b>	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](http://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. Bio-Rad recommend the use of [EQU003](#) for this purpose.**

<b>Target Species</b>	Mouse
<b>Species Cross Reactivity</b>	<p>Reacts with: Rat</p> <p>Reacts weakly with: Human</p> <p><b>N.B.</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</p>

further information.

<b>Product Form</b>	Purified IgG - liquid
<b>Preparation</b>	Purified IgG prepared by affinity chromatography on Protein G
<b>Buffer Solution</b>	Phosphate buffered saline
<b>Preservative Stabilisers</b>	0.09% Sodium Azide (NaN <sub>3</sub> )
<b>Approx. Protein Concentrations</b>	IgG concentration 1.0mg/ml
<b>Immunogen</b>	DLL1-expressing CHO cells.
<b>External Database Links</b>	<p><b>UniProt:</b></p> <p><a href="#">Q61483</a>      <a href="#">Related reagents</a></p> <p><a href="#">P97677</a>      <a href="#">Related reagents</a></p> <p><a href="#">O00548</a>      <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b></p> <p><a href="#">13388</a>    DII1      <a href="#">Related reagents</a></p> <p><a href="#">84010</a>    DII1      <a href="#">Related reagents</a></p> <p><a href="#">28514</a>    DLL1      <a href="#">Related reagents</a></p>
<b>RRID</b>	AB_10707934
<b>Fusion Partners</b>	Spleen cells from immunised Armenian hamsters were fused with cells of the P3U1 myeloma cell line.
<b>Specificity</b>	<p><b>Hamster anti Mouse Delta-Like Protein 1 antibody, clone HMD1-5</b> 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.</p> <p>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.</p> <p>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</p>

NF-kappaB-NICD and CSL-NICD-Delta 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](#))

<b>Flow Cytometry</b>	Use 10ul of the suggested working dilution to label 1x10 <sup>6</sup> cells in 100ul.
<b>Histology Positive Control Tissue</b>	Mouse spleen
<b>References</b>	<ol style="list-style-type: none"> <li>1. Moriyama, Y. <i>et al.</i> (2008) Delta-like 1 is essential for the maintenance of marginal zone B cells in normal mice but not in autoimmune mice. <a href="#">Int Immunol. 20 (6): 763-73.</a></li> <li>2. Sekine, C. <i>et al.</i> (2009) Differential regulation of splenic CD8- dendritic cells and marginal zone B cells by Notch ligands. <a href="#">Int Immunol. 21 (3): 295-301.</a></li> <li>3. Sekine, C. <i>et al.</i> (2012) Differential regulation of osteoclastogenesis by Notch2/Delta-like 1 and Notch1/Jagged1 axes. <a href="#">Arthritis Res Ther. 14: R45.</a></li> </ol>
<b>Further Reading</b>	<ol style="list-style-type: none"> <li>1. Bray, S.J. (2006) Notch signalling: a simple pathway becomes complex. <a href="#">Nat Rev Mol Cell Biol. 7 (9): 678-89.</a></li> <li>2. Iso, T. <i>et al.</i> (2003) Notch signaling in vascular development. <a href="#">Arterioscler Thromb Vasc Biol. 23 (4): 543-53.</a></li> <li>3. Hu, X. <i>et al.</i> (2008) Integrated regulation of Toll-like receptor responses by Notch and interferon-gamma pathways. <a href="#">Immunity. 29 (5): 691-703.</a></li> <li>4. Hoyne, G.F. <i>et al.</i> (2001) Notch signalling in the regulation of peripheral immunity. <a href="#">Immunol Rev. 182: 215-27.</a></li> </ol>
<b>Storage</b>	<p>Store at +4°C or at -20°C if preferred.</p> <p>Storage in frost-free freezers is not recommended.</p> <p>This product should be stored undiluted. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.</p>
<b>Guarantee</b>	12 months from date of despatch
<b>Health And Safety Information</b>	<p>Material Safety Datasheet documentation #10040 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA5705GA">https://www.bio-rad-antibodies.com/SDS/MCA5705GA</a></p> <p>10040</p>
<b>Regulatory</b>	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** Tel: +1 800 265 7376

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