

## Datasheet: MCA5702GA

**BATCH NUMBER L1710**

<b>Description:</b>	HAMSTER ANTI MOUSE NOTCH 2
<b>Specificity:</b>	NOTCH 2
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	HMN2-35
<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	▪			

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.

<b>Target Species</b>	Mouse
<b>Species Cross Reactivity</b>	Reacts with: Rat <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 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>	Mouse Notch 2-Fc fusion protein.
<b>External Database Links</b>	<p><b>UniProt:</b></p> <p><a href="#">O35516</a>      <a href="#">Related reagents</a></p> <p><a href="#">Q9QW30</a>      <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b></p> <p><a href="#">18129</a> Notch2    <a href="#">Related reagents</a></p> <p><a href="#">29492</a> Notch2    <a href="#">Related reagents</a></p>
<b>RRID</b>	AB_10708543
<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 Notch 2 antibody, clone HMN2-35</b> recognizes Notch 2, one of the four major transmembrane receptors (Notch 1-4) of the Notch signaling pathway, which is activated through binding to DSL domain-containing membrane-bound specific ligands.</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 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.</p> <p>Signaling through Notch 2 has been implicated in the development of marginal zone B cells (MZB), the sensitization of endothelial cells to apoptosis, and the regulation of the expression of CD23 in B-cell lymphocytic leukemia (B-CLL). Studies have also shown a correlation between a decrease in Notch 2 expression and an increase in grade of human breast cancer.</p> <p>Hamster anti Mouse Notch 2 antibody, clone HMN2-35 has been shown to cross-react with rat mast cell line RBL-2H3 and Y3 myeloma cells, in flow cytometry.</p>

**Flow Cytometry** Use 10ul of the suggested working dilution to label 1x10<sup>6</sup> cells in 100ul.

**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. Gibb, D.R. *et al.* (2010) ADAM10 is essential for Notch2-dependent marginal zone B cell development and CD23 cleavage *in vivo*. [J Exp Med. 207 \(3\): 623-35.](#)
4. Sakata-Yanagimoto, M. *et al.* (2011) Notch2 signaling is required for proper mast cell distribution and mucosal immunity in the intestine. [Blood. 117 \(1\): 128-34.](#)

**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** Store at +4°C or at -20°C if preferred.  
Storage in frost-free freezers is not recommended.  
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.

**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/MCA5702GA>  
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 \(MCA2356\)](#)

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**America** Fax: +1 919 878 3751

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