

## Datasheet: MCA5702GA

<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.
<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>	<b>UniProt:</b> <a href="#">O35516</a> <a href="#">Related reagents</a> <a href="#">Q9QW30</a> <a href="#">Related reagents</a>

**Entrez Gene:**

[18129](#) Notch2 [Related reagents](#)  
[29492](#) Notch2 [Related reagents](#)

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<b>Fusion Partners</b>	Spleen cells from immunised Armenian hamsters were fused with cells of the P3U1 myeloma cell line.
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<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>
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<b>Flow Cytometry</b>	Use 10ul of the suggested working dilution to label $1 \times 10^6$ cells in 100ul.
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<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. Gibb, D.R. <i>et al.</i> (2010) ADAM10 is essential for Notch2-dependent marginal zone B cell development and CD23 cleavage <i>in vivo</i>. <a href="#">J Exp Med. 207 (3): 623-35.</a></li><li>4. Sakata-Yanagimoto, M. <i>et al.</i> (2011) Notch2 signaling is required for proper mast cell distribution and mucosal immunity in the intestine. <a href="#">Blood. 117 (1): 128-34.</a></li></ol>
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<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></ol>
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4. Hoyne, G.F. *et al.* (2001) Notch signalling in the regulation of peripheral immunity. [Immunol Rev. 182: 215-27.](#)

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<b>Storage</b>	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.
<b>Shelf Life</b>	18 months from date of despatch.
<b>Health And Safety Information</b>	Material Safety Datasheet documentation #10040 available at: 10040: <a href="https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf">https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf</a>
<b>Regulatory</b>	For research purposes only

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## Related Products

### Recommended Secondary Antibodies

Goat Anti Hamster IgG (STAR104...) [DyLight®549](#), [DyLight®649](#), [DyLight®800](#),  
[FITC](#)

Goat Anti Hamster IgG (STAR79...) [Biotin](#), [FITC](#), [HRP](#)

### Recommended Negative Controls

[HAMSTER \(ARMENIAN\) IgG NEGATIVE CONTROL \(MCA2356\)](#)

<b>North &amp; South America</b>	Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: <a href="mailto:antibody_sales_us@bio-rad.com">antibody_sales_us@bio-rad.com</a>	<b>Worldwide</b>	Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: <a href="mailto:antibody_sales_uk@bio-rad.com">antibody_sales_uk@bio-rad.com</a>	<b>Europe</b>	Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: <a href="mailto:antibody_sales_de@bio-rad.com">antibody_sales_de@bio-rad.com</a>
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