Datasheet: MCA5702

BATCH NUMBER L1710

Description:	HAMSTER ANTI MOUSE NOTCH 2
Specificity:	NOTCH 2
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	HMN2-35
Isotype:	IgG
Quantity:	0.25 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	▪			

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

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	Mouse Notch 2-Fc fusion protein.
External Database Links	**UniProt:** O35516 Related reagents Q9QW30 Related reagents **Entrez Gene:** 18129 Notch2 Related reagents 29492 Notch2 Related reagents
RRID	AB_10708085
Fusion Partners	Spleen cells from immunised Armenian hamsters were fused with cells of the P3U1 myeloma cell line.
Specificity	**Hamster anti Mouse Notch 2 antibody, clone HMN2-35** 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. 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. 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. 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.

Flow Cytometry	Use 10ul of the suggested working dilution to label 1x10^6 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/MCA5702 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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