

Datasheet: MCA4713GA

Description:	RAT ANTI MOUSE P2X7
Specificity:	P2X7
Other names:	P2RX7
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	Hano43
Isotype:	IgG2b
Quantity:	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.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	■			1/25 - 1/200
Immunohistology - Frozen			■	
Immunohistology - Paraffin			■	
ELISA			■	
Immunoprecipitation			■	
Western Blotting			■	
Immunofluorescence	■			

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
Product Form	Purified IgG - liquid
Preparation	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant
Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	0.09% Sodium Azide (NaN ₃)
Carrier Free	Yes
Approx. Protein Concentrations	IgG concentration 1.0mg/ml
Immunogen	A P2X7-expression construct and a final boost with P2X7-transfected HEK cells.

**External Database
Links**

UniProt:

[Q9Z1M0](#)

[Related reagents](#)

Entrez Gene:

[18439](#)

P2rx7

[Related reagents](#)

Synonyms

P2x7

Fusion Partners

Spleen cells from immunised rats were fused with cells of the Sp2/0 myeloma cell line.

Specificity

Rat anti Mouse P2X7 antibody, clone Hano43 recognizes the P2X purinoceptor 7, also known as P2X7. The P2X7 ATP receptor has a distinctive long C-terminal tail with multiple potential protein and lipid interaction motifs and is highly polymorphic. It is a cation selective ion channel that opens up on binding of extracellular ATP. Sustained activation by extracellular ATP results in the formation of a reversible pore in the plasma membrane that is permeable to hydrophilic solutes of up to 900 Da. Once a pore is opened massive upset of cytoplasmic ion homeostasis occurs and the pore stays open as long as it is bound by ATP. Should ATP stimulation continue the cell will become irreversibly damaged and die. P2X7 plays a key role in the maturation and release of IL-1 and other IL-1 family members during inflammation. As such, P2X7 blockers might be useful as anti-inflammatory agents.

Flow Cytometry

Use 10ul of the suggested working dilution to label 1×10^6 cells in 100ul.

References

1. Adriouch, S. *et al.* (2005) Probing the expression and function of the P2X7 purinoceptor with antibodies raised by genetic immunization. [Cell Immunol. 236: 72-7.](#)
2. Adriouch, S. *et al.* (2008) ADP-ribosylation at R125 gates the P2X7 ion channel by presenting a covalent ligand to its nucleotide binding site. [FASEB J. 2008 Mar;22\(3\):861-9.](#)
3. Schwarz, N. *et al.* (2009) Activation of the P2X7 ion channel by soluble and covalently bound ligands. [Purinergic Signal. 5: 139-49.](#)
4. Aswad, F. and Dennert, G. (2006) P2X7 receptor expression levels determine lethal effects of a purine based danger signal in T lymphocytes. [Cell Immunol. 243: 58-65.](#)
5. Adriouch, S. *et al.* (2009) Characterisation of the R276A gain-of-function mutation in the ectodomain of murine P2X7. [Purinergic Signal. 5: 151-61.](#)
6. Danquah, W. *et al.* (2010) Preventing gating of the P2X7 ion channel in vitro and in vivo with monoclonal antibodies and recombinant single domain Nanobodies [Purines 2010: Adenine Nucleosides and Nucleotides in Biomedicine Meeting: Abstract P2-24](#)
7. Kurashima, Y. *et al.* (2012) Extracellular ATP mediates mast cell-dependent intestinal inflammation through P2X7 purinoceptors. [Nat Commun. 3: 1034.](#)
8. Hu, S.J. *et al.* (2015) Upregulation of P2RX7 in Cx3cr1-Deficient Mononuclear Phagocytes Leads to Increased Interleukin-1 β Secretion and Photoreceptor Neurodegeneration. [J Neurosci. 35 \(18\): 6987-96.](#)
9. Barabási, B. *et al.* (2016) Effect of axotomy and 17 β -estradiol on P2X7 receptor expression pattern in the hypoglossal nucleus of ovariectomized mice. [Neuroscience. 319: 107-15.](#)

Further Reading

1. Ferrari, D. *et al.* (2006) The P2X7 receptor: a key player in IL-1 processing and release. [J Immunol. 176: 3877-83.](#)

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.

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

Related Products

Recommended Secondary Antibodies

Rabbit Anti Rat IgG (STAR16...)	DyLight®800
Goat Anti Rat IgG (STAR73...)	RPE
Rabbit Anti Rat IgG (STAR21...)	HRP
Rabbit Anti Rat IgG (STAR17...)	FITC
Goat Anti Rat IgG (MOUSE ADSORBED) (STAR71...)	DyLight®549 , DyLight®649 , DyLight®800
Goat Anti Rat IgG (STAR131...)	Alk. Phos. , Biotin
Goat Anti Rat IgG (STAR69...)	FITC
Goat Anti Rat IgG (STAR72...)	HRP

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