Datasheet: MCA4686GA

Description:	MOUSE ANTI HUMAN CYTOCHROME B245 LIGHT CHAIN
Specificity:	CYTOCHROME B245 LIGHT CHAIN
Other names:	p22phox
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	CS9
Isotype:	IgG1
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)	▪			1/10 - 1/100
Immunohistology - Frozen	▪			
Immunohistology - Paraffin			▪	
ELISA	▪			
Immunoprecipitation	▪			
Western Blotting	▪			

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)**Membrane permeabilisation is required for this application. Bio-Rad recommends the use of Leucoperm™ (Product Code BUF09) for this purpose.**

Target Species	Human
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	0.09% Sodium Azide (NaN_3)

Stabilisers	
Carrier Free	Yes
Approx. Protein Concentrations	IgG concentration 1.0mg/ml
Immunogen	Cytochrome B245 solubilised in octyl-beta-gluycopyranoside.
External Database Links	**UniProt:** P13498 Related reagents **Entrez Gene:** 1535 CYBA Related reagents
RRID	AB_1935432
Fusion Partners	Spleen cells from immunised BALB/c mice were fused with cells of the 3PU1 myeloma cell line.
Specificity	**Mouse anti Human Cytochrome B245 Light Chain antibody, clone CS9** recognizes the light chain of cytochrome B245, also known as p22phox, a subunit of the nicotinamide adenine dinucleotide phosphate-oxidase (NADPH oxidase). NADPH oxidase is a membrane-bound enzyme complex in neutrophils that produces the superoxide anion (O_2^-) by transferring single electrons from NADPH inside the cell across the membrane and coupling them to molecular oxygen. Superoxide is used for the destruction of pathogens. Individuals with defects in NADPH oxidase suffer from chronic granulomatous disease, characterised by severe recurrent infections. The light chain (p22phox), along with the heavy chain (gp91phox) form cytochrome B245 (also known as flavocytochome b, or Cyt b), which is always membrane-resident. Upon the appropriate stimulus, other components of NADPH oxidase (p47phox, p40phox, p67phox and Rac2) rapidly translocate from the cytosol to the cell membrane to form the complete enzyme complex. Cytochrome B245 appears to serve as a scaffold for the assembly of the other cytosolic units of the oxidase and to provide a transmembrane pathway for electrons. The core region of the CS9 epitope is amino acids 165 - 169 (KKPSE), a cytosolic epitope on p22phox not accessible on intact neutrophils. Mouse anti Human Cytochrome B245 Light Chain antibody, clone CS9 also has an inhibitory effect on NADPH oxidase activation.
Flow Cytometry	Use 10ul of the suggested working dilution to label $1x10^6$ cells in 100ul.
Western Blotting	MCA4686GA detects a band of approximately 19kDa in neutrophil membrane extracts
References	1. Taylor, R.M. *et al.* (2004) Site-specific inhibitors of NADPH oxidase activity and structural probes of flavocytochrome b: characterization of six monoclonal antibodies to

	the p22phox subunit. J Immunol. 173 (12): 7349-57.
Storage	This product is shipped at ambient temperature. It is recommended to aliquot and store at -20°C on receipt. When thawed, aliquot the sample as needed. Keep aliquots at 2-8°C for short term use (up to 4 weeks) and store the remaining aliquots at -20°C. Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended.
Guarantee	12 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

Goat Anti Mouse IgG (STAR77...)	HRP
Rabbit Anti Mouse IgG (STAR12...)	RPE
Rabbit Anti Mouse IgG (STAR8...)	DyLight®800
Goat Anti Mouse IgG (STAR76...)	RPE
Rabbit Anti Mouse IgG (STAR9...)	FITC
Goat Anti Mouse IgG (Fc) (STAR120...)	FITC, HRP
Goat Anti Mouse IgG IgA IgM (STAR87...)	Alk. Phos., HRP
Rabbit Anti Mouse IgG (STAR13...)	HRP
Goat Anti Mouse IgG (H/L) (STAR117...)	Alk. Phos., DyLight®488, DyLight®680, DyLight®800, FITC, HRP
Goat Anti Mouse IgG (STAR70...)	FITC

Recommended Negative Controls

MOUSE IgG1 NEGATIVE CONTROL (MCA928)

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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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