

Datasheet: MCA4686A647

Description:	MOUSE ANTI HUMAN CYTOCHROME B245 LIGHT CHAIN:Alexa Fluor® 647
Specificity:	CYTOCHROME B245 LIGHT CHAIN
Other names:	p22phox
Format:	ALEXA FLUOR® 647
Product Type:	Monoclonal Antibody
Clone:	CS9
Isotype:	IgG1
Quantity:	100 TESTS/1ml

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)	■			Neat
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 conjugated to Alexa Fluor® 647 - liquid		
Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm)
	Alexa Fluor®647	650	665
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	1% Bovine Serum Albumin		
Approx. Protein Concentrations	IgG concentration 0.05mg/ml		

Immunogen	Cytochrome B245 solubilised in octyl-beta-glucopyranoside.
External Database Links	UniProt: P13498 Related reagents Entrez Gene: 1535 CYBA Related reagents
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 (O₂⁻) 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 flavocytochrome 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.
References	1. Taylor, R.M. <i>et al.</i> (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	Store at +4°C or at -20°C if preferred. Storage in frost-free freezers is not recommended. This product should be stored undiluted. This product is photosensitive and should be protected from light. 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.
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Health And Safety Information	Material Safety Datasheet documentation #10041 available at: 10041: https://www.bio-rad-antibodies.com/uploads/MSDS/10041.pdf
Regulatory	For research purposes only

Related Products

Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL:Alexa Fluor® 647 \(MCA928A647\)](#)

Recommended Useful Reagents

[HUMAN SEROBLOCK \(BUF070A\)](#)

[HUMAN SEROBLOCK \(BUF070B\)](#)

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