

PRODUCT SPECIFICATION

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HYB 076-08 Anti-*Mycobacterium tuberculosis* ESAT-6 Mouse monoclonal antibody

OVERVIEW	Product Name	HYB 076-08 Anti- <i>Mycobacterium tuberculosis</i> ESAT-6		
	Article No.	49391 (0.2 mL), 100838 (1.0 mL)		
	Clone ID	11G4		
	Subclass	IgG1 / Kappa		
	Specificity	HYB 076-08 reacts with the 6-kDa early secretory antigenic target (ESAT-6) of <i>Mycobacterium tuberculosis</i> .		
	Species Reactivity	HYB 076-08 reacts with the 6-kDa early secretory antigenic target (ESAT-6) from short-term culture filtrates of <i>M. tuberculosis</i> and virulent strains of <i>M. bovis</i> . Interspecies analyses with HYB 076-08 showed the presence of ESAT-6 in filtrates from <i>M. tuberculosis</i> complex species, and among filtrates from mycobacteria not belonging to the <i>M. tuberculosis</i> complex, reactivity was observed in <i>M. kansasii</i> , <i>M. szulgai</i> , and <i>M. marinum</i> (1).		
	Epitope Specificity	HYB 076-08 binds to an epitope consisting of the residues EQQWNFAGIEAAA at positions 3-15 (2).		
	Immunogen	Purified protein derivative (PPD) from <i>Mycobacterium tuberculosis</i> (Tuberculin PPD, RT23, Statens Serum Institut) coupled to merthiolate N-hydroxysuccinimide ester (1).		
	Fusion Partner	X63-Ag8.653.		
	Culture Medium	Dulbecco's modified Eagle's medium with 10 % fetal calf serum		
TESTED APPLICATION	Method	Usability	References	
	Enzyme linked immunosorbent assay (ELISA)	Yes	1, 3, 4	
	Immunoblotting	Yes	1, 3	
	Immunofluorescence	n.d.		
PRODUCT SPECIFIC INFORMATION	HYB 076-08 is suitable for detection of ESAT-6 by ELISA and Western Blot. In western blot HYB 076-08 reacts with the 6-kDa early secretory antigenic target (ESAT-6) from short-term culture filtrates of <i>M. tuberculosis</i> and virulent strains of <i>M. bovis</i> . Interspecies analyses with HYB 076-08 showed the presence of ESAT-6 in filtrates from <i>M. tuberculosis</i> complex species. Among filtrates from mycobacteria not belonging to the <i>M. tuberculosis</i> complex, reactivity was observed in <i>M. kansasii</i> , <i>M. szulgai</i> , and <i>M. marinum</i> (1). HYB 076-08 reacts with PPD, culture filtrate, cytosol and cell wall preparations from <i>M. tuberculosis</i> (3).			
PROPERTIES	Conjugation:	Unconjugated		
	Form	Liquid		
	Preparation:	Protein-A		
	Concentration:	1 mg/mL \pm 10%, based on A ₂₈₀ . See Certificate of Analysis for details.		

SSI Antibodies

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	Solvent:	PBS
	Storage information:	Store at ≤ -18 °C.
TARGET	The ESAT-6 antigen from Mycobacterium tuberculosis is a virulent factor of the bacterium and a dominant target for cell-mediated immunity in the early phase of tuberculosis in patients and animal models (4-5). ESAT-6 is present in culture filtrate, cytosol and cell wall preparations from M. tuberculosis. Since ESAT-6 is absent in all Bacille Calmette-Guérin (BCG) vaccine strains and the vast majority of nontuberculous mycobacteria, it can be used as a biomarker to differentiate between latent tuberculosis infection and prior BCG vaccination (4-6).	
REFERENCES	<ol style="list-style-type: none">1) Klausen J, Magnusson M, Andersen AB, Koch C (1994) Characterization of purified protein derivative of tuberculin by use of monoclonal antibodies: isolation of a delayed-type hypersensitivity reactive component from M. tuberculosis culture filtrate. Scand J Immunol 40:345-9.2) Harboe M, Malin AS, Dockrell HS, Wiker HG, Ulvund G, Holm A, Jorgensen MC, Andersen P (1998) B-Cell epitopes and quantification of the ESAT-6 protein of Mycobacterium tuberculosis. Infect Immun 66:717-23.3) Sorensen AL, Nagai S, Houen G, Andersen P, Andersen AB (1995) Purification and characterization of a low-molecular-mass T-cell antigen secreted by Mycobacterium tuberculosis. Infect Immun 63:1710-174) Harboe M, Oettinger T, Wiker HG, Rosenkrands I, Andersen P (1996) Evidence for occurrence of the ESAT-6 protein in Mycobacterium tuberculosis and virulent Mycobacterium bovis and for its absence in Mycobacterium bovis BCG. Infect Immun 64:16-225) Ravn P, Demissie A, Eguale T, Wondwosson H, Lein D, Amoudy HA, Mustafa AS, Jensen AK, Holm A, Rosenkrands I, Oftung F, Olobo J, von Reyn F, Andersen P (1999) Human T cell responses to the ESAT-6 antigen from Mycobacterium tuberculosis. J Infect Dis 179:637-6456) Brock I, Weldingh K, Lillebaek T, Follmann F, Andersen P (2004) Comparison of Tuberculin Skin Test and New Specific Blood Test in Tuberculosis Contacts. Am J Respir Crit Care Med. 170(1):65-9	

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Conditions

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