

**Anti *Mycobacterium tuberculosis*, ESAT-6  
Mouse Monoclonal Antibody**Subclass: IgG<sub>1</sub>/κPRODUCT NO. **HYB 076-08**

PRESENTATION Preparation: Protein-A/G purified  
 Content: 1 ml, 1 mg/mL  
 Solvent: 0.01 M phosphate buffer, pH 7.4, with 0.5 M NaCl and 15mM sodium azide  
 Storage: In the dark at 4-8°C

ANTIGEN The ESAT-6 antigen from *Mycobacterium tuberculosis* is a dominant target for cell-mediated immunity in the early phase of tuberculosis (TB) in TB patients as well as in various animal models (2,5).

IMMUNOGEN PPD from *Mycobacterium tuberculosis* (Tuberculin PPD, RT23, Statens Serum Institut) (1)

SPECIFICITY HYB 076-08 is specific for a 10-kDa band from short term culture of *M. tuberculosis* in Western blotting after SDS-PAGE. The 10-kDa band was identified as the protein ESAT-6 (Rv3875). Interspecies analyses with HYB 076-08 showed the presence of ESAT-6 in filtrates from *M. tuberculosis* complex species. Among filtrates from mycobacteria not belonging to the *M. tuberculosis* complex, reactivity was observed in *Mycobacterium kansasii*, *Mycobacterium szulgai*, and *Mycobacterium marinum*.

EPI TOPE SPECIFICITY HYB 076-08 binds to an epitope consisting of the residues EQQWNFAGIEAAA at positions 3-15 (4).

REACTIVITY HYB 076-08 reacts with PPD, culture filtrate, cytosol and cell wall preparations from *M. tuberculosis*.

CULTURE MEDIUM Dulbecco's modified Eagle's medium with 10% fetal calf serum

FUSION PARTNER X63-Ag8.653.

IMMUNIZATION Female CF1 x BALB/c mice, immunized i.p. with immunogen adsorbed onto Al(OH)<sub>3</sub>

Method	Usability	Dilution guideline	References
ELISA	Yes	1:3200	1,3,4,5
Immunoblotting	Yes		1,3
Immunohistochemistry	Not determined		

The dilution guideline for ELISA is based on use as detection antibody for antigen coated at high concentration. Users should determine the optimal dilutions for their own purposes.

- REFERENCES
- 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* 63:1710-17.
  - 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* 179:637-645.
  - 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. (In this paper, HYB 076-08 is erroneously described as reacting with a 10 kDa band).
  - 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.
  - 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* 64:16-22.

**CONDITIONS**

All products are supplied on the understanding that they are for in vitro use only. The information and product are offered without guarantee as the ultimate conditions of use are beyond our control. The animals from which this product was derived have not been exposed to or inoculated with any livestock or poultry disease agents exotic to the United States or Western Europe, and did not originate from facilities where work with exotic disease agents affecting livestock or avian species is carried out.