

**Anti-*Mycobacterium tuberculosis* ESAT-6
Mouse monoclonal antibody**

Subclass: IgG1/k

PRODUCT NO.

HYB 076-08

Clone: 11 G4

PRESENTATION

Preparation: Protein-A/G purified

Content: Available in 200 µL and 1 mL size. 1 mg/mL +/- 15%. See Certificate of Analysis for details.

Solvent: 0.01 M phosphate buffer, pH 7.4, containing 0.5 M NaCl and 15 mM sodium azide

Storage: 4-8°C without exposure to light. No precautions necessary during handling.

ANTIGEN

ESAT-6 (6-kDa early secretory antigenic target) from *Mycobacterium tuberculosis* H37Rv (ATCC 27294) (1) is a secreted tubercular protein that forms a dominant target for cell-mediated immunity in the early phase of infection (2). The deduced amino acid sequence indicates a molecular mass of 10 kDa. It is present in *M. tuberculosis*, virulent strains of *M. bovis*, and in *M. flavescens*, *M. kansasii*, *M. marinum*, and *M. szulgai*, but not in avirulent *M. bovis* BCG substrains (3).

IMMUNOGEN

Purified protein derivative (PPD) of tuberculin from *M. tuberculosis* conjugated with thimerosal N-hydroxysuccinimide ester and adsorbed to aluminum hydroxide gel (4).

SPECIFICITY

HYB 076-08 reacts with ESAT-6 in immunoblotting after SDS-PAGE of short-term culture filtrates of *M. tuberculosis* and virulent strains of *M. bovis*. HYB 076-08 cross-reacts with MPB64 (26 kDa) from certain BCG substrains, with the A, B, and C components of the antigen 85 complex and with MPT51.

EPI TOPE SPECIFICITY

Binds to residues 3-15 (EQQWNFAGIEAAA) of ESAT-6 (5)

REACTIVITY

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

CULTURE MEDIUM

RPMI 1640 with 10% fetal calf serum

FUSION PARTNER

X63-Ag8.653

IMMUNIZATION

BCG-primed female CF1 x BALB/c F1 mice immunized by intraperitoneal injection

APPLICATION

Method	Usability	References
ELISA	Yes	5
Immunoblotting	Yes	1,3,4
Immunohistochemistry	Not determined	

REFERENCES

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- 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.
- 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* 40:345-349.
- Harboe M, Malin AS, Dockrell HS, Wiker HG, Ulvund G, Holm A, Jørgensen MC, Andersen P (1998) B-cell epitopes and quantification of the ESAT-6 protein of *Mycobacterium tuberculosis*. *Infect Immun* 66:717-723.

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