

Product Data Sheet

<input type="checkbox"/> Cat # MTB161-M	Monoclonal Anti-Mycobacterium tuberculosis antigen (16kDa/Hspx) IgG	Size: 100 ul
<input type="checkbox"/> Cat # MTB161-C	Recombinant purified M. tuberculosis antigen (16kDa/Hspx) control for Western	Size: 100 ul

Tuberculosis or TB (short for tubercles bacillus) is a common and often deadly infectious disease caused by various strains of mycobacteria, usually Mycobacterium tuberculosis in humans. The M. tuberculosis complex includes four other TB-causing mycobacteria: M. bovis, M. africanum, M. canetti and M. microti. M. africanum is not widespread, but in parts of Africa it is a significant cause of tuberculosis.

The closely related proteins of the antigen 85 complex, initially identified in Mycobacterium bovis BCG, are major secreted products of mycobacteria growing in synthetic media. Three closely related components, termed antigens **85A, 85B, and 85C**, have been demonstrated in M. bovis BCG and M. tuberculosis. Although the antigens are genetically distinct, they are highly homologous and cross-react with polyclonal and monoclonal antibodies raised against individual components. The genes encoding antigen 85A, a 32-kDa protein also referred to as P32, while genes for 85B, a 30- to 31-kDa protein variously termed MPB59 or alpha antigen. Sequence analysis revealed 85% identity between the M. bovis BCG 85A and 85B components in the amino acid sequence of the mature secreted proteins. The 85C component, a 31.5-kDa protein, is encoded by a different gene in M. tuberculosis. **Antigen 85B** of M. Tuberculosis is the most abundant as well as a potent immunoprotective antigen and a leading drug target. Ag85 induces strong T-cell proliferation and IFN-g secretion in most healthy individuals exposed to M. tuberculosis, in BCG-vaccinated mice and humans, whereas the antibody against Ag85 are more prevalent in active tuberculosis patients with decreased cellular immune response.

Antigen 85-B, 85B, Extracellular alpha-antigen, Antigen 85 complex B, Ag85B, Mycolyl transferase 85B, EC 2.3.1.-, Fibronectin-binding protein B, 30 kDa extracellular protein, fbpB, A85B, Major Secretory Protein Antigen 85B

Source of Antigen and Antibodies

Antigen	Recombinant M. tuberculosis 16 kda protein
Ab Host/type	Mouse, Monoclonal , IgG2a, Aff pure (cat # MTB161-M) (in PBS, pH 7.5 containing 0.01% proclin-300,
2-ab	Goat Anti-mouse IgG-HRP conjugate Cat # 40320 (AP, biotin, FITC conjugates also available).
-ve control IgG	Cat # 20008-1, Mouse (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as -ve control

M. tuberculosis 16 kda is produced in E. coli as his-tag fusion protein and purified (16 kda, 95%). For Western blot +ve control (**Cat # MTB161-C**) is supplied in SDS-PAGE sample buffer (reduced). Load 10 ul/lane of **MTB161-C** for good visibility with antibody Cat # **MTB161-M**. Store at -20oC in suitable size aliquots. SDS may crystallize in cold conditions. It should redissolve by warming before taking it from the stock. It should be heated once prior to loading on gels. If the product has been stored for several weeks, then it may be preferable to add 5 ul of

fresh 2x sample buffer per 10 ul of the **MTB161-C** solution prior to heating and loading on gels. This preparation is not biologically active. It is not suitable for ELISA or other applications where native protein is required. Do not freeze, thaw, or heat repeatedly

Form & Storage

Affinity pure IgG

- (solution (lyophilized powder
- Buffer: PBS pH 7.4 and 0.01% proclin-300
- Reconstitute powder** in water

Storage

Short-term: unopened, undiluted liquid vials for less than a week at 4oC.

Long-term: at -20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 12 months at -20oC or below.

Shipping: 4oC for solutions and room temp for powder.

Recommended Usage

Western Blotting (1:500-1:2000) using ECL.

ELISA (1:1000-0.1-1 ug/ml indirect ELISA or to at 1-10 ug/ml in ELISA.

Histochemistry & Immunofluorescence: not tested.

References: Peake P (1993) Inf. Immun. 61, 4828-4834; Borremans MI (1989) Inf. Immun. 57, 3123-3130; deWit LA (1990) Nuc. Acid. Res. 18, 395;

Related items

MTB06-R Recombinant (E. coli) Mycobacterium tuberculosis antigen (6kDa)

MTB16-R Recombinant (E. coli) Mycobacterium tuberculosis antigen (16kDa)

MTB38-R Recombinant (E. coli) Mycobacterium tuberculosis antigen (38kDa)

RP-627 Recombinant Mycobacterium Tuberculosis Heat Shock Protein 65

RP-628 Recombinant Mycobacterium Tuberculosis Heat Shock Protein 70

RP-977 Recombinant ESAT-6 (6kDa early secretory antigen of T cells; Mycobacterium Tuberculosis)

RP-977-100 Recombinant ESAT-6 (6kDa early secretory antigen of T cells; Mycobacterium Tuberculosis)

RP-999 Recombinant Mycobacterium Tuberculosis major secretory protein Antigen 85B

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