ALPHA DIAGNOSTIC INTERNATIONAL

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Product Data Sheet

Mycobacterium tuberculosis antigen 6kDa (6-kDa early secreted antigenic target, ESTA-6) Antibodies and positive controls

Cat # MTB061-M	Mouse monoclonal anti-M. tuberculosis antigen (6kDa/ESTA-6) IgG	**Size**: 100 ug
Cat # MTB061-C	Recombinant purified M. tuberculosis antigen (6kDa/ESTA-6) control for Western	**Size**: 100 ul

Mycobacterium genus includes pathogens known to cause serious diseases in mammals, including tuberculosis (Tuberculae Basillus/Mycobacterium Tuberculae) and leprosy (Leprae Basillus/Mycobacterium Leprae). Tuberculosis or TB (short for tubercles bacillus) is a common and often deadly infectious disease usually caused by Mycobacterium tuberculosis.

The closely related proteins of the antigen 85 complex (85A, 85B, and 85C), initially identified in Mycobacterium bovis are major secreted products of mycobacteria growing in synthetic media. 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, have been cloned from M. bovis BCG and M. tuberculosis, while genes for 85B, a 30- to 31-kDa protein variously termed MPB59 or alpha antigen, have been isolated from M. bovis BCG, Mycobacterium kansasii, and Mycobacterium leprae. 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.

The proteins that are secreted by mycobacteria have gained particular attention in the recent years both as vaccine candidates and virulence factors. Some of these proteins like CFP-10 and ESAT-6 are encoded by the RD-1 region of Mtb genome, a region consistently deleted in all BCG vaccine strains of M. bovis. This antigen includes many epitopes detectable in the serum of most patients with tuberculosis (more than 90%). Recently it was shown that ESAT-6 could be used for diagnostic assay for differentiation between the mycobacterial infection and BCG vaccination. The main topic in ESAT-6 using is in antibody production and in test-systems for tuberculosis elaboration.

Antigen	Recombinant purified M. tuberculosis antigen (6kDa/ESTA-6) protein
Ab Host/type	Mouse, Monoclonal , IgG1, Aff pure IgG (**cat # MTB061-M**) in PBS, pH 7.5 containing 0.05% azide,
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

#MTB061-C, western control:

M. tuberculosis antigen ESTA-6 is produced in E. coli and purified (6 kda, >95%). For Western blot +ve control (**Cat #** MTB061-C) is supplied in SDS-PAGE sample buffer (reduced). Load 10 ul/lane of MTB061-C for good visibility with antibody Cat # MTB061-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 MTB061-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 of Antibodies/Peptide Control

Affinity pure IgG

100 ug/100ul solution lyophilized powder
Supplied in **Buffer**: PBS+0.05% azide
Reconstitute powder in PBS at 1mg/ml

Storage

Short-term: unopened, undiluted liquid vials at -20OC and powder at 4oC or -20oC..

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

Stability: 6-12 months at –20oC or below.
Shipping: 4oC for solutions and room temp for powder

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 Myobacterium Tuberculosis Heat Shock Protein 65

RP-628 Recombinant Myobacterium Tuberculosis Heat Shock Protein 70

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

Alpha Diagnostic Intl Inc., 6203 Woodlake Center Dr, San Antonio, TX 78244, USA; **Email**: service@4adi.com

India Contact:
Life Technologies (India) Pvt. Ltd.
306, Aggarwal City Mall, Opposite M2K Pitampura, Delhi – 110034 (INDIA). Ph: +91-11-42208000, 42208111, 42208222, Mobile: +91-9810521400, Fax: +91-11-42208444
Email: customerservice@lifetechindia.com Website: www.lifetechindia.com