ALPHA DIAGNOSTIC INTERNATIONAL

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Product Data Sheet

□ Cat# PPD11-A	Anti-purified protein derivative (PPD/M. tuberculosis) IgG	**Size**:100 ul
□ Cat# PPD11-BTN	Anti-purified protein derivative (PPD/M. tuberculosis) IgG-biotin conjugate	**Size**:100 ul
□ Cat# PPD11-FITC	Anti-purified protein derivative (PPD/M. tuberculosis) IgG-FITC conjugate	**Size**:100 ul

Tuberculosis, MTB, or TB (short for tubercle bacillus) is a common, and in many cases lethal, infectious disease caused by various strains of mycobacteria, usually Mycobacterium tuberculosis. The infectious agents of tuberculosis are acid-resistant rod-like bacteria of the family Mycobacteriaceae, genus Mycobacterium. Individuals with HIV are at risk for infection by tuberculosis due to their impaired immune system. The only currently available vaccine as of 2012 is **bacillus Calmette–Guérin (BCG** with live attenuated bacteria) which, while it is effective against disseminated disease in childhood, confers inconsistent protection against contracting pulmonary TB. A number of new TB vaccines are currently in phase I and II clinical trials. MVA85A (modified vaccinia Ankara 85A) is a subunit vaccine to BCG. This vaccine produces higher levels of long-lasting cellular immunity when used together with the old TB vaccine called BCG.

The closely related proteins of the antigen 85 complex, initially identified in M. bovis BCG are major secreted products of mycobacteria. 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. Sequence analysis revealed 85% identity between the M. bovis BCG 85A and 85B proteins. Many mycobacterial antigens have been identified, such as 71, 65, 38, 23, 19, 16, 14 and 12-kDa proteins. The 38-kDa protein is an immunodominant lipoprotein antigen isolated as a component of antigen 5 by affinity chromatography, and is specific only for the M. tuberculosis complex. It is the most extensively studied antigen. The 16-kDa antigen is an immunodominant antigen, frequently called 14 kDa, related to the family of low molecular weight heat-shock proteins. This antigen contains B-cell epitopes specific for the M. tuberculosis complex.

Tuberculin is an extract of Mycobacterium tuberculosis, M. bovis, or M. avium that is used in skin testing in animals and humans to identify a tuberculosis infection. Several types of tuberculin have been used for this, of which **purified protein derivative** (**PPD**) is the most important. PPD is a poorly defined, complex mixture of antigens. Tuberculin is an outer membrane protein of Mycobacterium species.

Source of Antibodies and Antigen

Antigen	Whole BCG Proteins
Ab Host/type	Rabbit, Polyclonal IgG, (**Cat # PPD11-A**) supplied in PBS/azide
2-Ab	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available).
-ve	Cat # 20009-1, Rabbit (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as –ve control

Store antibodies at -20oC in cool and dry place. Reconstitute powder in water or other buffer and store frozen at -20oC or below for long term storage.

Cat# PPD11-BTN, Biotin-conjugate

Purified antibody was coupled to Biotin using Biotinamidocaproate N-Hydroxysuccinimide Ester (BAC**)** at F/P ratio ~10-20:1. The antibody is supplied in PBS, pH 7.4, 0.2% BSA and 0.05% azide in either **lyophilized** (0.1 mg) or **liquid** form (0.1 mg/0.1 ml). Reconstitute powder in PBS in 0.1 ml to prepare 1 mg/ml solution. Store at -20oC in suitable aliquots. Stability is ~6-12 months. Do not freeze and thaw.

Suggested conjugate dilutions are 1:5,000-1:30,000 ELISA, 1:2K-1:10K for western.

Cat# PPD11-FITC, FITC-conjugate

Purified antibody was coupled to FITC at F/P ratio ~3:7. The antibody is supplied in PBS, pH 7.4, 0.2% BSA and 0.05% azide in either **lyophilized** (0.1 ml) or **liquid** form (0.1 mg/0.1 ml). Reconstitute powder in PBS in 0.1 ml to prepare 1 mg/ml solution. Store at -20oC in suitable aliquots. Stability is ~6-12 months. Do not freeze and thaw.

Suggested conjugate dilutions are 1:200-1:2000 for immunofluorescence.
Absorption Wavelength: 495 nm
Emission Wavelength: 528 nm

Usage

ELISA or Western and IF/IHC

Optimize concentration of the antibody for each technique.

References: Mustafa A (1999) Inf. Imm. 67, 5683-5689; Al_attiya R (2003) Inf. Imm. 71, 1953-1960; Renshaw PS (2005) EMBO J. 24, 2491-2498; Meher Ak (2006) FEBS J. 273, 1445-1462; Sorensen AL (1995) Inf. Immun. 63, 1710-1717; Berthet FX (1998) Microbiol. 144, 3195-3203; Brodin P (2006) Inf. Immun. 74, 88-98; Rensahw PS (2002) JBC 277, 21598-21603

This item is for LABORATORY ESEARCH USE ONLY.

Related Items

990-100-THA	Human Anti-Mycobacterium Tuberculosis IgA ELISA
990-110-THG	Human Anti-Mycobacterium Tuberculosis IgG ELISA
990-120-THM	Human Anti-Mycobacterium Tuberculosis IgM ELISA
990-210-TMG	Mouse Anti-Mycobacterium Tuberculosis IgG ELISA
990-220-TMM	Mouse Anti-Mycobacterium Tuberculosis IgM ELISA
990-230-06G	Mouse Anti-M.Tuberculosis 6kDa/ESAT-6 IgG ELISA
990-235-06M	Mouse Anti-M. Tuberculosis 6kDa/ESAT-6 IgM
990-240-16G	Mouse Anti-M. Tuberculosis 16kDa/Hspx IgG ELISA
990-245-16M	Mouse Anti-M. Tuberculosis 16kDa/Hspx IgM ELISA
990-250-38G	Mouse Anti-M. Tuberculosis 38kda/Ag85b IgG ELISA
990-255-38M	Mouse Anti-M. Tuberculosis 38kda/Ag85b IgM ELISA
990-260-38G	Human Anti-M. Tuberculosis MVA vaccine (38kda/Ag85b) IgG ELISA kit,
990-265-38M	Human Anti-M. Tuberculosis MVA vaccine (38kda/Ag85b) IgM ELISA kit,
990-310-TRG	Rabbit Anti-Mycobacterium Tuberculosis IgG ELISA
990-320-TRM	Rabbit Anti-Mycobacterium Tuberculosis IgM ELISA
990-400-MTG	Monkey Mycobacterium Tuberculosis IgG ELISA kit,
990-410-MTM	Monkey Mycobacterium Tuberculosis IgM ELISA kit,

PPD11-A 130328A

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