

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human T-bet/TBX21 in direct ELISAs.
Source	Monoclonal Mouse IgG ₁ Clone # 525831
Purification	Protein A or G purified from cell culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human T-bet/TBX21 Glu326-Asn535 Accession # Q9UL17
Conjugate	Alexa Fluor 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Intracellular Staining by Flow Cytometry	0.25-1 µg/10 ⁶ cells	Human peripheral blood mononuclear cells (PBMCs) treated with Anti-Human IL-4 Polyclonal Antibody (Catalog # AB-204-NA; 20 µg/mL) and Recombinant Human IL-12 (Catalog # 219-IL; 10 ng/mL) for 5 days to induce Th1 cell development were fixed and permeabilized with FlowX FoxP3 Fixation & Permeabilization Buffer Kit (Catalog # FC012)

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. <ul style="list-style-type: none"> 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

T-box expressed in T cells (T-bet), also known as T-box transcription factor TBX21, is a 62 kDa member of the T-box family of transcription factors and the Tbr1 subfamily. Human T-bet is 535 amino acids in length and contains a T-box DNA binding domain (aa 136-327). Human T-bet shares 88% aa sequence identity with mouse T-bet. T-bet is a nuclear protein highly apparent in Th1 cells. Northern blot analysis revealed that it is also expressed in lung, thymus and spleen. Functionally, T-bet controls the expression of the Th1 cytokine, IFN-γ, and initiates Th1 lineage development from naïve Th precursor cells by both activating Th1 genetic programs and by repressing the opposing Th2 programs.

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