Mouse T-bet/TBX21 Antibody

Monoclonal Rat IgG_{2B} Clone # 1087415

Catalog Number: MAB11627

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects a synthetic peptide specific for mouse T-bet around amino acid 20 in Direct ELISA.
Source	Monoclonal Rat IgG_{2B} Clone # 1087415
Purification	Protein A or G purified from cell culture supernatant
Immunogen	Synthetic Peptide Accession # Q9JKD8
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose.

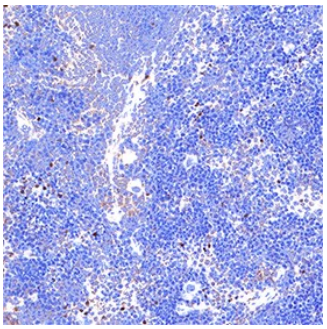
APPLICATIONS

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
Western Blot	2 µg/mL	HT-2 mouse T cell line
Immunohistochemistry	3-25 µg/mL	Immersion fixed paraffin-embedded sections of mouse spleen

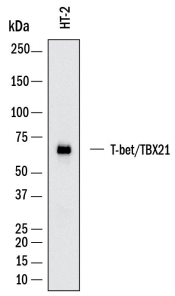
DATA

Immunohistochemistry-Paraffin



Detection of T-bet/TBX21 in Mouse Spleen. T-bet/TBX21 was detected in immersion fixed paraffin-embedded sections of mouse spleen using Rat Anti-Mouse T-bet/TBX21 Monoclonal Antibody (Catalog # MAB11627) at 5 µg/ml overnight at 4 °C. Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using VisUCyte Antigen Retrieval Reagent-Basic (Catalog # VCTS021). Tissue was stained using the HRP-conjugated Anti-Rat IgG Secondary Antibody (Catalog # HAF005) and counterstained with hematoxylin (blue). Specific staining was localized to the nucleus. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

Western Blot



Detection of Mouse T-bet/TBX21 by Western Blot. Western Blot shows lysates of HT-2 mouse T cell line. PVDF membrane was probed with 2 µg/ml of Rat Anti-Mouse T-bet/TBX21 Monoclonal Antibody (Catalog # MAB11627) followed by HRP-conjugated Anti-Rat IgG Secondary Antibody (Catalog # HAF005). A specific band was detected for T-bet/TBX21 at approximately 60 kDa (as indicated). This experiment was conducted under reducing conditions and using Western Blot Buffer Group 1.

PREPARATION AND STORAGE

Reconstitution	Reconstitute lyophilized material at 0.2 mg/ml in sterile PBS. For liquid material, refer to CoA for concentration.
Shipping	Lyophilized product is shipped at ambient temperature. Liquid small pack size (-SP) is shipped with polar packs. Upon receipt, store immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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BACKGROUND

T-box transcription factor TBX21, also known as T-bet, is a 58kDa T-box gene which encodes transcription factors involved in the regulation of developmental processes. TBX21 is a Th1 cell-specific transcription that controls the expression of interferon-gamma. TBX21 also has an important role in many cells of the adaptive and innate immune system and is also expressed in dendritic cells, natural killer cells, natural killer T cells and innate lymphoid cells. T-bet contributes to the maintenance of mucosal homeostasis and mucosal immune response. Mice lacking adaptive immune cells and T-bet developed disease similar to human ulcerative colitis.

References:

1. Lazarevic V, Glimcher LH, Lord GM. T-bet: a bridge between innate and adaptive immunity. Nat Rev Immunol. 2013 Nov;**13(11)**:777-89. doi: 10.1038/nri3536. Epub 2013 Oct 11. PMID: 24113868; PMCID: PMC6290922.
2. Mohamed R, Lord GM. T-bet as a key regulator of mucosal immunity. Immunology. 2016 Apr;**147(4)**:367-76. doi: 10.1111/imm.12575. Epub 2016 Feb 23. PMID: 26726991; PMCID: PMC4799884.

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