10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

# TBX21 Antibody
**Rabbit mAb**
**Catalog # AP92048**

## Specification

### TBX21 Antibody - Product Information

| | |
|---|---|
| Application | **IHC** |
| Primary Accession | Q9UL17 |
| Clonality | **Monoclonal** |

**Other Names**
T bet; T box 21; T PET; TBET; TBLYM; Tbx21; TPET;

| | |
|---|---|
| Isotype | **Rabbit IgG** |
| Host | **Rabbit** |
| Calculated MW | **58328 Da** |

### TBX21 Antibody - Additional Information

| | |
|---|---|
| Purification | **Affinity-chromatography** |
| Immunogen | **A synthesized peptide derived from human T-bet / Tbx21** |
| Description | **Transcription factor that controls the expression of the TH1 cytokine, interferon-gamma. Initiates TH1 lineage development from naive TH precursor cells both by activating TH1 genetic programs and by repressing the opposing TH2 programs.** |
| Storage Condition and Buffer | **Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.** |

### TBX21 Antibody - Protein Information

**Name** TBX21

**Synonyms** TBET, TBLYM

**Function**
Lineage-defining transcription factor which initiates Th1 lineage development from naive Th precursor cells both by activating Th1 genetic programs and by repressing the opposing Th2 and Th17 genetic programs (PubMed:<a href="http://www.uniprot.org/citations/10761931" target="_blank">10761931</a>). Activates transcription of a set of genes important for Th1 cell function, including those encoding IFN- gamma and the chemokine receptor CXCR3. Induces permissive chromatin accessibilty and CpG methylation in IFNG (PubMed:<a href="http://www.uniprot.org/citations/33296702" target="_blank">33296702</a>). Activates IFNG and CXCR3 genes in part by recruiting chromatin remodeling complexes including KDM6B, a

SMARCA4-containing SWI/SNF-complex, and an H3K4me2-methyltransferase complex to their promoters and all of these complexes serve to establish a more permissive chromatin state conducive with transcriptional activation (By similarity). Can activate Th1 genes also via recruitment of Mediator complex and P-TEFb (composed of CDK9 and CCNT1/cyclin-T1) in the form of the super elongation complex (SEC) to super-enhancers and associated genes in activated Th1 cells (PubMed:<a href="http://www.uniprot.org/citations/27292648" target="_blank">27292648</a>). Inhibits the Th17 cell lineage commitment by blocking RUNX1-mediated transactivation of Th17 cell-specific transcriptinal regulator RORC. Inhibits the Th2 cell lineage commitment by suppressing the production of Th2 cytokines, such as IL-4, IL-5, and IL- 13, via repression of transcriptional regulators GATA3 and NFATC2. Protects Th1 cells from amplifying aberrant type-I IFN response in an IFN-gamma abundant microenvironment by acting as a repressor of type-I IFN transcription factors and type-I IFN-stimulated genes. Acts as a regulator of antiviral B-cell responses; controls chronic viral infection by promoting the antiviral antibody IgG2a isotype switching and via regulation of a broad antiviral gene expression program (By similarity). Required for the correct development of natural killer (NK) and mucosal-associated invariant T (MAIT) cells (PubMed:<a href="http://www.uniprot.org/citations/33296702" target="_blank">33296702</a>).

**Cellular Location**
Nucleus

**Tissue Location**
T-cell specific..

## TBX21 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

## TBX21 Antibody - Images