

Anti-T-bet / Tbx21 Antibody

ER1802-65



Product Type:	Rabbit polyclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	WB, FC, IHC-P
Molecular Wt:	Predicted band size: 58 kDa

Description: T-box transcription factor TBX21, also called T-bet (T-box expressed in T cells), is a protein that in humans is encoded by the TBX21 gene. Though being for long thought of only as a master regulator of type 1 immune response, T-bet has recently been shown to be implicated in development of various immune cell subsets and maintenance of mucosal homeostasis. This gene is a member of a phylogenetically conserved family of genes that share a common DNA-binding domain, the T-box. T-box genes encode transcription factors involved in the regulation of developmental processes. This gene is the human ortholog of mouse Tbx21/Tbet gene. Studies in mouse show that Tbx21 protein is a Th1 cell-specific transcription factor that controls the expression of the hallmark Th1 cytokine, interferon-gamma (IFN γ). Expression of the human ortholog also correlates with IFN γ expression in Th1 and natural killer cells, suggesting a role for this gene in initiating Th1 lineage development from naive Th precursor cells.

Immunogen: Synthetic peptide within Human Tbx21 aa 486-535 / 535.

Positive control: NK-92 cell lysates, Raji, human lymph nodes tissue.

Subcellular location: Nucleus.

Database links: SwissProt: Q9UL17 Human

Recommended Dilutions:

WB	1:500
FC	1 μ g/mL
IHC-P	1:500

Storage Buffer: 1*PBS (pH7.4), 0.2% BSA, 50% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4°C. Store at +4°C short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20°C long term.

Purity: Immunogen affinity purified.

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Orders:0086-571-88062880

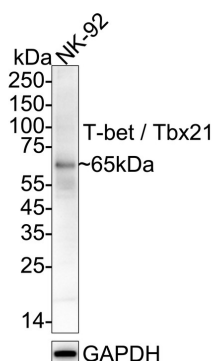
Technical:0086-571-89986345

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Images

Fig1: Western blot analysis of T-bet / Tbx21 on NK-92 cell lysates with Rabbit anti-T-bet / Tbx21 antibody (ER1802-65) at 1/2,000 dilution.



Lysates/proteins at 20 µg/Lane.

Predicted band size: 58 kDa

Observed band size: 65 kDa

Exposure time: 1 minute; ECL: K1801;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDN/TBST for 1 hour at room temperature. The primary antibody (ER1802-65) at 1/2,000 dilution was used in primary antibody dilution (K1803) at 4°C overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

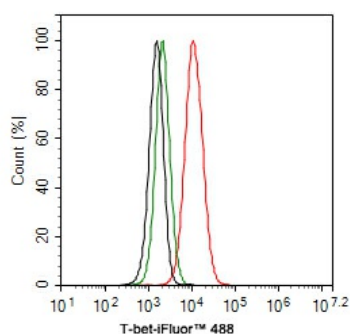
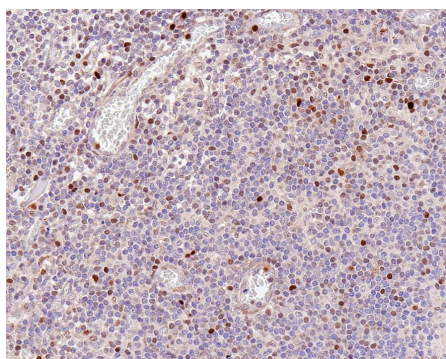


Fig2: Flow cytometric analysis of Raji cells labeling T-bet / Tbx21.

Cells were fixed and permeabilized. Then stained with the primary antibody (ER1802-65, 1µg/ml) (red) compared with Rabbit IgG Isotype Control (green). After incubation of the primary antibody at +4°C for an hour, the cells were stained with a iFluor™ 488 conjugate-Goat anti-Rabbit IgG Secondary antibody (HA1121) at 1/1,000 dilution for 30 minutes at +4°C. Unlabelled sample was used as a control (cells without incubation with primary antibody; black).

Fig3: Immunohistochemical analysis of paraffin-embedded human lymph nodes tissue with Rabbit anti-T-bet / Tbx21 antibody (ER1802-65) at 1/500 dilution.



The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) (high pressure) for 2 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH₂O and PBS, and then probed with the primary antibody (ER1802-65) at 1/500 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

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Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Yang X et al. TBX21 inhibits colorectal cancer metastasis through ARHGAP29/GSK3beta inhibitory signaling- and MYCT1/ZO-1 signaling-dependent manner. *Int J Biol Sci.* 2025 Jan
2. Zou Z et al. TBX21 knockdown attenuates neuroinflammation induced by intracerebral hemorrhage via the SIRT1-WDR5-H3K4me3 axis. *Brain Res Bull.* 2025 Sep

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