

Anti-T-bet / Tbx21 antibody [39D, 3-9D] ab91103

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Overview

Product name	Anti-T-bet / Tbx21 antibody [39D, 3-9D]
Description	Mouse monoclonal [39D, 3-9D] to T-bet / Tbx21
Host species	Mouse
Tested applications	Suitable for: WB, ICC, ChIP
Species reactivity	Reacts with: Mouse, Human
Immunogen	Recombinant full length protein corresponding to T-bet/ Tbx21. Recombinant protein purified from E.coli
Positive control	WB: Th1-polarized mouse CD4+ T cells, NK-92 cell lysate ICC: NK-92 cells ChIP: NK-92 cells
General notes	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	<p>pH: 7.20</p> <p>Preservative: 0.09% Sodium azide</p> <p>Constituent: PBS</p>
Purity	Protein G purified
Clonality	Monoclonal
Clone number	39D, 3-9D
Isotype	IgG1

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab91103 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		Use a concentration of 2 µg/ml. Predicted molecular weight: 58 kDa.
ICC		Use a concentration of 5 µg/ml.
ChIP		Use 2.5µg for 10 ⁶ cells.

Target

Function

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.

Tissue specificity

T-cell specific.

Involvement in disease

Genetic variations in TBX21 are associated with susceptibility to asthma with nasal polyps and aspirin intolerance (ANPAI) [MIM:208550]. A condition consisting of asthma, aspirin sensitivity and nasal polyposis. Nasal polyposis is due to chronic inflammation of the paranasal sinus mucosa, leading to protrusion of edematous polyps into the nasal cavities.

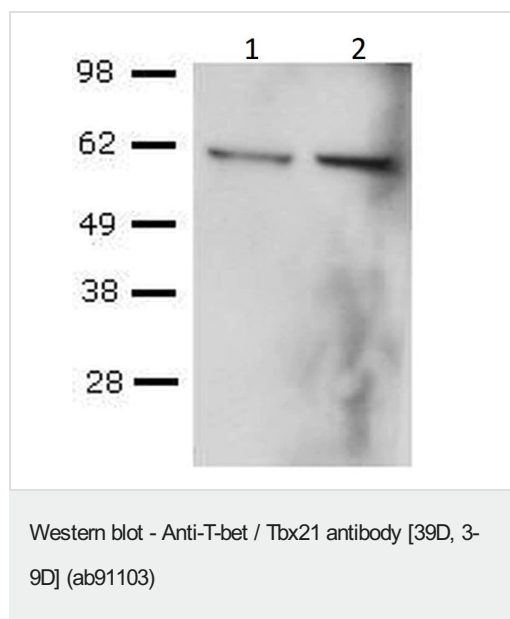
Sequence similarities

Contains 1 T-box DNA-binding domain.

Cellular localization

Nucleus.

Images



All lanes : Anti-T-bet / Tbx21 antibody [39D, 3-9D] (ab91103) at 2 µg/ml

Lane 1 : Lysates from control cells

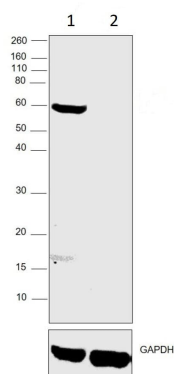
Lane 2 : Lysates from PMA and Ionomycin-re-activated cells

Secondary

All lanes : HRP anti-mouse IgG

Predicted band size: 58 kDa

CD4⁺ T cells were sorted from mouse spleen, activated with anti-mouse CD3 and anti-mouse CD28, followed by culture in Th1-polarizing conditions, and re-activation with PMA and Ionomycin.



Western blot - Anti-T-bet / Tbx21 antibody [39D, 3-9D] (ab91103)

All lanes : Anti-T-bet / Tbx21 antibody [39D, 3-9D] (ab91103) at 2 µg/ml

Lane 1 : NK-92 cell lysates

Lane 2 : K-562 cell lysates

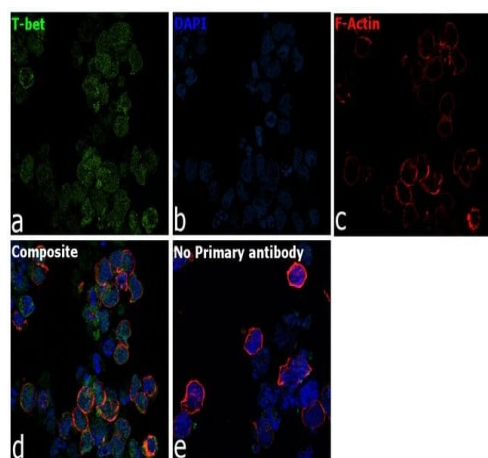
Lysates/proteins at 30 µg per lane.

Secondary

All lanes : Goat anti-Mouse IgG (H+L), Superclonal™

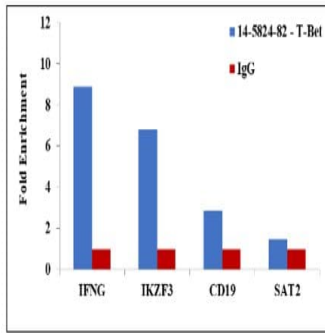
Recombinant, HRP at 1/4000 dilution

Predicted band size: 58 kDa



Immunocytochemistry - Anti-T-bet / Tbx21 antibody [39D, 3-9D] (ab91103)

Immunocytochemistry analysis of T-bet/ Tbx21 was performed using 70% confluent log phase NK-92 cells. The cells were fixed with 4% paraformaldehyde for 10 Minutes, permeabilized with 0.1% Triton™ X-100 for 15 minutes, and blocked with 2% BSA for 1 hour at room temperature. The cells were labeled with ab91103 at 5 µg/mL in 0.1% BSA, incubated at 4 degree Celsius overnight and then labeled with Goat anti-Mouse IgG (H+L), Superclonal™ Recombinant Secondary Antibody, Alexa Fluor 488 at a dilution of 1/2000 for 45 minutes at room temperature (Panel a: green). Nuclei (Panel b: blue) were stained with ProLong™ Diamond Antifade Mountant with DAPI. F-actin (Panel c: red) was stained with Rhodamine Phalloidin. Panel d represents the merged image showing nuclear localization. Panel e represents control cells with no primary antibody to assess background. The images were captured at 60X magnification.



ChIP - Anti-T-bet / Tbx21 antibody [39D, 3-9D]
(ab91103)

Chromatin Immunoprecipitation (ChIP) assay of endogenous T-bet protein using Anti-T-bet Antibody: ChIP was performed using ab91103 at 5 µg on sheared chromatin from NK-92 cells using the MAGnify ChIP System kit. Normal Mouse IgG was used as a negative IP control. The purified DNA was analyzed by qPCR using primers binding to IFNG promoter, IKZF3 and CD19 transcriptional start site and SAT2 satellite repeats. Data is presented as fold enrichment of the antibody signal versus the negative control IgG using the comparative CT method.

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