

Datasheet for ABIN7561633  
**T-Bet Protein (AA 1-530) (His tag)**



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## Overview

Quantity:	1 mg
Target:	T-Bet
Protein Characteristics:	AA 1-530
Origin:	Mouse
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This T-Bet protein is labelled with His tag.

## Product Details

Purpose:	Custom-made recombinant Tbx21 Protein expressed in mammalian cells.
Sequence:	<p>MGIVEPGCGD MLTGTEPMPS DEGRGPGADQ QHRFFYPEPG AQDPTDRRAG SSLGTPYSGG ALVPAAPGRF LGSFAYPPRA QVAGFPGPGE FFPPPAGAEG YPPVDGYAPAP DPRAGLYPGP REDYALPAGL EVSGKLRVAL SNHLLWSKFN QHQTEMIITK QGRRMFPFLS FTVAGLEPTS HYRMFVDVVL VDQHHWRYQS GKWWQCGKAE GSMPGNRLYV HPDSPNTGAH WMRQEVSF GK LKL TNNKGAS NNVTQMIVLQ SLHKYQPR LH IVEVNDGEPE AAC SASNTHV FTFQETQFIA VTAYQNAEIT QLKIDNNPFA KGFRENFESM YASVDTSVPS PPGPNCQLLG GDPFSPLLSN QYPVPSRFYP DLPGQPKDMI SQPYWLGTPR EHSYEA EFRA VSMKPTLLPS APGPTVPYYR GQDVLAPGAG WPVAPQYPPK MSPAGWFRPM RTLPM DPGLG SSEEQ GSSPS LWPEV TSLQP EPDSGLGEG DTKRRRISPY PSSGDSSSPA GAPSPFDKET EGQFYNYFPN <b>Sequence without tag. The proposed Purification-Tag is based on experiences with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.</b></p>

## Product Details

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**Specificity:** If you are looking for a specific domain and are interested in a partial protein or a different isoform, please contact us regarding an individual offer.

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**Characteristics:** **Key Benefits:**

- Made to order protein - from design to production - by highly experienced protein experts.
- Protein expressed in mammalian cells and purified in one-step affinity chromatography
- The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins.
- State-of-the-art algorithm used for plasmid design (Gene synthesis).

This protein is a made-to-order protein and will be made for the first time for your order. Our experts in the lab try to ensure that you receive soluble protein.

If you are not interested in a full length protein, please contact us for individual protein fragments.

The big advantage of ordering our made-to-order proteins in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.

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**Purity:** > 90 % as determined by Bis-Tris PAGE, anti-tag ELISA, Western Blot and analytical SEC (HPLC)

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**Grade:** custom-made

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## Target Details

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**Target:** T-Bet

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**Alternative Name:** Tbx21 ([T-Bet Products](#))

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**Background:** T-box transcription factor TBX21 (T-box protein 21) (T-cell-specific T-box transcription factor T-bet) (Transcription factor 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. Activates transcription of a set of genes important for Th1 cell function, including those encoding IFN-gamma and the chemokine receptor CXCR3. 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 (PubMed:10761931, PubMed:17923685, PubMed:21095589). Can activate Th1 genes also via recruitment of Mediator complex and P-TEFb (composed of CDK9

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## Target Details

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and CCNT1/cyclin-T1) in the form of the super elongation complex (SEC) to super-enhancers and associated genes in activated Th1 cells (PubMed:27292648). Inhibits the Th17 cell lineage commitment by blocking RUNX1-mediated transactivation of Th17 cell-specific transcriptional regulator RORC (PubMed:21151104). 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 (PubMed:15662016, PubMed:21690296, PubMed:23616576). 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 (PubMed:28623086). 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 (PubMed:27430722).

{ECO:0000269|PubMed:10761931, ECO:0000269|PubMed:15662016, ECO:0000269|PubMed:17923685, ECO:0000269|PubMed:21095589, ECO:0000269|PubMed:21151104, ECO:0000269|PubMed:21690296, ECO:0000269|PubMed:23616576, ECO:0000269|PubMed:27292648, ECO:0000269|PubMed:27430722, ECO:0000269|PubMed:28607488, ECO:0000269|PubMed:28623086}.

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Molecular Weight: 57.9 kDa

UniProt: [Q9JKD8](#)

## Application Details

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Application Notes: We expect the protein to work for functional studies. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.

Restrictions: For Research Use only

## Handling

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Format: Liquid

Buffer: The buffer composition is at the discretion of the manufacturer.

Handling Advice: Avoid repeated freeze-thaw cycles.

Storage: -80 °C

Storage Comment: Store at -80°C.

Expiry Date: 12 months