

Datasheet for ABIN7554214  
**ITK Protein (AA 1-620) (His tag)**



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## Overview

Quantity:	1 mg
Target:	ITK
Protein Characteristics:	AA 1-620
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This ITK protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS)

## Product Details

Purpose:	Custom-made recombinat ITK Protein expressed in mammalian cells.
Sequence:	MNNFILLEEQ LIKKSQKRR TSPSNFKVRF FVLTKASLAY FEDRHGKRT LKGSIELSRI KCVEIVKSDI SIPCHYKYPF QVVDNYLLY VFAPDRESRQ RWVLALKEET RNNNSLVPKY HPNFWMDGKW RCCSQLEKLA TGCAQYDPTK NASKKPLPPT PEDNRRPLWE PEETVVIALY DYQTNDPQEL ALRRNEEYCL LDSSEIHWWR VQDRNGHEGY VPSSYLVEKS PNNLETYEWY NKSISRDKAE KLLLDTGKEG AFMVRDSRTA GTYTVSVFTK AVVSENNPCI KHYHIKETND NPKRYVVAEK YVFSIPLLI NYHQHNGGGL VTRLRYPVCF GRQKAPVTAG LRYGKWVIDP SELTFVQEIG SGQFGLVHLG YWLNKDKVAI KTIREGAMSE EDFIEEAEMV MKLSHPKLVQ LYGVCLEQAP ICLVFEFMEH GCLSDYLRTQ RGLFAAETLL GMCLDVCEGM AYLEEACVIH RDLAARNCLV GENQVIKVSF FGMTRFVLDL QYTSSTGTFK PVKWASPEVF SFSRYSSKSD VWSFGVLMWE VFSEGKIPYE NRSNSEVVED ISTGFRLYKP RLASTHVYQI MNHCWKERPE DRPAFSRLLR QLAEIAESGL <b>Sequence without tag. The proposed Purification-Tag is based on</b>

**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.**

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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, Western Blot

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### Grade:

custom-made

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## Target Details

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### Target:

ITK

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### Alternative Name:

ITK ([ITK Products](#))

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### Background:

Tyrosine-protein kinase ITK/TSK (EC 2.7.10.2) (Interleukin-2-inducible T-cell kinase) (IL-2-inducible T-cell kinase) (Kinase EMT) (T-cell-specific kinase) (Tyrosine-protein kinase Lyk),FUNCTION: Tyrosine kinase that plays an essential role in regulation of the adaptive immune response. Regulates the development, function and differentiation of conventional T-cells and nonconventional NKT-cells. When antigen presenting cells (APC) activate T-cell receptor (TCR), a series of phosphorylation lead to the recruitment of ITK to the cell membrane, in the vicinity of the stimulated TCR receptor, where it is phosphorylated by LCK. Phosphorylation leads to ITK autophosphorylation and full activation. Once activated, phosphorylates PLCG1, leading to the activation of this lipase and subsequent cleavage of its substrates. In turn, the endoplasmic reticulum releases calcium in the cytoplasm and the nuclear activator of activated T-cells (NFAT) translocates into the nucleus to perform its

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## Target Details

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transcriptional duty. Phosphorylates 2 essential adapter proteins: the linker for activation of T-cells/LAT protein and LCP2. Then, a large number of signaling molecules such as VAV1 are recruited and ultimately lead to lymphokine production, T-cell proliferation and differentiation (PubMed:12186560, PubMed:12682224, PubMed:21725281). Required for TCR-mediated calcium response in gamma-delta T-cells, may also be involved in the modulation of the transcriptomic signature in the Vgamma2-positive subset of immature gamma-delta T-cells (By similarity). Phosphorylates TBX21 at 'Tyr-530' and mediates its interaction with GATA3 (By similarity). {ECO:0000250|UniProtKB:Q03526, ECO:0000269|PubMed:12186560, ECO:0000269|PubMed:12682224, ECO:0000269|PubMed:21725281}.

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Molecular Weight: 71.8 kDa

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UniProt: [Q08881](#)

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Pathways: [TCR Signaling, Fc-epsilon Receptor Signaling Pathway](#)

## Application Details

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Application Notes: In addition to the applications listed above we expect the protein to work for functional studies as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.

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Restrictions: For Research Use only

## Handling

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Format: Liquid

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

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Handling Advice: Avoid repeated freeze-thaw cycles.

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Storage: -80 °C

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Storage Comment: Store at -80°C.

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Expiry Date: 12 months