Datasheet for ABIN7564810

TREX1 Protein (AA 1-314) (His tag)

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Overview

Quantity:	1 mg
Target:	TREX1
Protein Characteristics:	AA 1-314
Origin:	Mouse
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This TREX1 protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Purpose:	Custom-made recombinat Trex1 Protein expressed in mammalien cells.
Sequence:	MGSQTLPHGH MQTLIFLDLE ATGLPSSRPE VTELCLLAVH RRALENTSIS QGHPPPVPRP PRVVDKLSLC IAPGKACSPG ASEITGLSKA ELEVQGRQRF DDNLAILLRA FLQRQPQPCC LVAHNGDRYD FPLLQTELAR LSTPSPLDGT FCVDSIAALK ALEQASSPSG NGSRKSYSLG SIYTRLYWQA PTDSHTAEGD VLTLLSICQW KPQALLQWVD EHARPFSTVK PMYGTPATTG TTNLRPHAAT ATTPLATANG SPSNGRSRRP KSPPPEKVPE APSQEGLLAP LSLLTLLTLA IATLYGLFLA SPGQ **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.**
Characteristics:	Key Benefits: • Made to order protein - from design to production - by highly experienced protein experts.

Product Details

	• Protein expressed in mammalien 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.
Purity:	> 90 % as determined by Bis-Tris Page, Western Blot
Grade:	custom-made

Target Details

Target:	TREX1
Alternative Name:	Trex1 (TREX1 Products)
Background:	Three-prime repair exonuclease 1 (EC 3.1.11.2) (3'-5' exonuclease TREX1),FUNCTION: Major cellular 3'-to-5' DNA exonuclease which digests single-stranded DNA (ssDNA) and double-stranded DNA (dsDNA) with mismatched 3' termini (PubMed:10391904, PubMed:11279105, PubMed:15254239, PubMed:17293595, PubMed:17355961, PubMed:18780819). Prevents cell-intrinsic initiation of autoimmunity (PubMed:18724932, PubMed:24218451). Acts by metabolizing DNA fragments from endogenous retroelements, including L1, LTR and SINE elements (PubMed:18724932). Plays a key role in degradation of DNA fragments at cytosolic micronuclei arising from genome instability: its association with the endoplasmic reticulum membrane directs TREX1 to ruptured micronuclei, leading to micronuclear DNA degradation (By similarity). Micronuclear DNA degradation is required to limit CGAS activation and subsequent inflammation (By similarity). Unless degraded, these DNA fragments accumulate in the cytosol and activate the cGAS-STING innate immune signaling, leading to the production of type I interferon (PubMed:18724932). Prevents chronic ATM-dependent checkpoint activation, by processing ssDNA polynucleotide species arising from the processing of aberrant DNA replication intermediates (PubMed:18045533). Inefficiently degrades oxidized DNA, such as

Target Details

	that generated upon antimicrobial reactive oxygen production or upon absorption of UV light (PubMed:23993650). During GZMA-mediated cell death, contributes to DNA damage in concert with NME1 (By similarity). NME1 nicks one strand of DNA and TREX1 removes bases from the free 3' end to enhance DNA damage and prevent DNA end reannealing and rapid repair (By similarity). {ECO:0000250|UniProtKB:Q9NSU2, ECO:0000269|PubMed:10391904, ECO:0000269|PubMed:11279105, ECO:0000269|PubMed:15254239, ECO:0000269|PubMed:17293595, ECO:0000269|PubMed:17355961, ECO:0000269|PubMed:18045533, ECO:0000269|PubMed:18724932, ECO:0000269|PubMed:18780819, ECO:0000269|PubMed:23993650, ECO:0000269|PubMed:24218451}.
Molecular Weight:	33.7 kDa
UniProt:	Q91XB0
Pathways:	Apoptosis

Application Details

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.
Restrictions:	For Research Use only

Handling

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