Datasheet for ABIN7555749

TFEB Protein (AA 1-476) (His tag)

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Overview

Quantity:	1 mg
Target:	TFEB
Protein Characteristics:	AA 1-476
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This TFEB protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Purpose:	Custom-made recombinat TFEB Protein expressed in mammalien cells.
Sequence:	MASRIGLRMQ LMREQAQQEE QRERMQQQAV MHYMQQQQQQ QQQQLGGPPT PAINTPVHFQ SPPPVPGEVL KVQSYLENPT SYHLQQSQHQ KVREYLSETY GNKFAAHISP AQGSPKPPPA ASPGVRAGHV LSSSAGNSAP NSPMAMLHIG SNPERELDDV IDNIMRLDDV LGYINPEMQM PNTLPLSSSH LNVYSSDPQV TASLVGVTSS SCPADLTQKR ELTDAESRAL AKERQKKDNH NLIERRRRFN INDRIKELGM LIPKANDLDV RWNKGTILKA SVDYIRRMQK DLQKSRELEN HSRRLEMTNK QLWLRIQELE MQARVHGLPT TSPSGMNMAE LAQQVVKQEL PSEEGPGEAL MLGAEVPDPE PLPALPPQAP LPLPTQPPSP FHHLDFSHSL SFGGREDEGP PGYPEPLAPG HGSPFPSLSK KDLDLMLLDD SLLPLASDPL LSTMSPEASK ASSRRSSFSM EEGDVL **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.**

Product Details

Characteristics:	Key Benefits: • Made to order protein - from design to production - by highly experienced protein experts. • 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:	TFEB
Alternative Name:	TFEB (TFEB Products)
Background:	Transcription factor EB (Class E basic helix-loop-helix protein 35) (bHLHe35),FUNCTION: Transcription factor that acts as a master regulator of lysosomal biogenesis, autophagy, lysosomal exocytosis, lipid catabolism, energy metabolism and immune response (PubMed:21617040, PubMed:22576015, PubMed:22343943, PubMed:22692423, PubMed:25720963, PubMed:30120233, PubMed:31672913, PubMed:32612235, PubMed:32753672, PubMed:35662396, PubMed:36697823, PubMed:36749723, PubMed:37079666). Specifically recognizes and binds E-box sequences (5'-CANNTG-3'), efficient DNA-binding requires dimerization with itself or with another MiT/TFE family member such as TFE3 or MITF (PubMed:1748288, PubMed:19556463, PubMed:29146937). Involved in the cellular response to amino acid availability by acting downstream of MTOR: in the presence of nutrients, TFEB phosphorylation by MTOR promotes its cytosolic retention and subsequent inactivation (PubMed:21617040, PubMed:22576015, PubMed:22343943, PubMed:22692423, PubMed:25720963, PubMed:32612235, PubMed:32753672, PubMed:35662396,

	PubMed:36697823). Upon starvation or lysosomal stress, inhibition of MTOR induces TFEB dephosphorylation, resulting in nuclear localization and transcription factor activity (PubMed:22576015, PubMed:22343943, PubMed:22692423, PubMed:25720963, PubMed:32612235, PubMed:32753672, PubMed:35662396, PubMed:36697823). Specifically recognizes and binds the CLEAR-box sequence (5'-GTCACGTGAC-3') present in the regulatory region of many lysosomal genes, leading to activate their expression, thereby playing a central role in expression of lysosomal genes (PubMed:19556463, PubMed:22692423). Regulates lysosomal positioning in response to nutrient deprivation by promoting the expression of PIP4P1 (PubMed:29146937). Acts as a positive regulator of autophagy by promoting expression of genes involved in autophagy (PubMed:21617040, PubMed:22576015, PubMed:23434374, PubMed:27278822). In association with TFE3, activates the expression of CD40L in T-cells, thereby playing a role in T-cell-dependent antibody responses in activated CD4(+) T-cells and thymus-dependent humoral immunity (By similarity). Specifically recognizes the gamma-E3 box, a subset of E-boxes, present in the heavy-chain immunoglobulin enhancer (PubMed:2115126). Plays a role in the signal transduction processes required for normal vascularization of the placenta (By similarity). Involved in the immune response to infection by the bacteria S.aureus, S.typhimurium or S.enterica: infection promotes itaconate production, leading to alkylation, resulting in nuclear localization and transcription factor activity (PubMed:35662396). Itaconate-mediated alkylation activates TFEB-dependent lysosomal biogenesis, facilitating the bacteria clearance during the antibacterial innate immune response (PubMed:35662396). In association with ACSS2, promotes the expression of genes involved in lysosome biogenesis and both autophagy upon glucose deprivation (PubMed:28552616). {ECO:0000250|UniProtKB:Q9R210, ECO:0000269|PubMed:1748288, ECO:0000269|PubMed:19556463, ECO:0000269|PubMed:2115126, ECO:0000269|PubMed:21617040, ECO:0000269|PubMed:22343943, ECO:0000269|PubMed:22576015, ECO:0000269|PubMed:22692423, ECO:0000269|PubMed:23434374, ECO:0000269|PubMed:25720963, ECO:0000269|PubMed:27278822, ECO:0000269|PubMed:28552616, ECO:0000269|PubMed:29146937, ECO:0000269|PubMed:30120233, ECO:0000269|PubMed:31672913, ECO:0000269|PubMed:32612235, ECO:0000269|PubMed:32753672, ECO:0000269|PubMed:35662396, ECO:0000269|PubMed:36697823, ECO:0000269|PubMed:36749723, ECO:0000269|PubMed:37079666}.
Molecular Weight:	52.9 kDa
UniProt:	P19484

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

