Datasheet for ABIN7555780

TFE3 Protein (AA 1-575) (His tag)

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Overview

Quantity:	1 mg
Target:	TFE3
Protein Characteristics:	AA 1-575
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This TFE3 protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Purpose:	Custom-made recombinat TFE3 Protein expressed in mammalien cells.
Sequence:	MSHAAEPARD GVEASAEGPR AVFVLLEERR PADSAQLLSL NSLLPESGIV ADIELENVLD PDSFYELKSQ PLPLRSSLPI SLQATPATPA TLSASSSAGG SRTPAMSSSS SSRVLLRQQL MRAQAQEQER RERREQAAAA PFPSPAPASP AISVVGVSAG GHTLSRPPPA QVPREVLKVQ THLENPTRYH LQQARRQQVK QYLSTTLGPK LASQALTPPP GPASAQPLPA PEAAHTTGPT GSAPNSPMAL LTIGSSSEKE IDDVIDEIIS LESSYNDEML SYLPGGTTGL QLPSTLPVSG NLLDVYSSQG VATPAITVSN SCPAELPNIK REISETEAKA LLKERQKKDN HNLIERRRRF NINDRIKELG TLIPKSSDPE MRWNKGTILK ASVDYIRKLQ KEQQRSKDLE SRQRSLEQAN RSLQLRIQEL ELQAQIHGLP VPPTPGLLSL ATTSASDSLK PEQLDIEEEG RPGAATFHVG GGPAQNAPHQ QPPAPPSDAL LDLHFPSDHL GDLGDPFHLG LEDILMEEEE GVVGGLSGGA LSPLRAASDP LLSSVSPAVS KASSRRSSFS MEEES **Sequence without tag. The proposed Purification-Tag is based on experiences with the expression system, a different complexity**

Product Details

	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. • 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:	TFE3
Alternative Name:	TFE3 (TFE3 Products)
Background:	Transcription factor E3 (Class E basic helix-loop-helix protein 33) (bHLHe33),FUNCTION: Transcription factor that acts as a master regulator of lysosomal biogenesis and immune response (PubMed:2338243, PubMed:24448649, PubMed:29146937, PubMed:30733432, PubMed:31672913, 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 TFEB or MITF (PubMed:24448649). Involved in the cellular response to amino acid availability by acting downstream of MTOR: in the presence of nutrients, TFE3 phosphorylation by MTOR promotes its inactivation (PubMed:24448649, PubMed:31672913, PubMed:36608670). Upon starvation or lysosomal stress, inhibition of MTOR induces TFE3 dephosphorylation, resulting in transcription factor activity (PubMed:24448649, PubMed:31672913, PubMed:36608670). Specifically recognizes and binds the CLEAR-box

Target Details

	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:24448649). Maintains the pluripotent state of embryonic stem cells by promoting the expression of genes such as ESRRB, mTOR-dependent TFE3 cytosolic retention and inactivation promotes exit from pluripotency (By similarity). Required to maintain the naive pluripotent state of hematopoietic stem cell, mTOR-dependent cytoplasmic retention of TFE3 promotes the exit of hematopoietic stem cell from pluripotency (PubMed:30733432). TFE3 activity is also involved in the inhibition of neuronal progenitor differentiation (By similarity). Acts as a positive regulator of browning of adipose tissue by promoting expression of target genes, mTOR-dependent phosphorylation promotes cytoplasmic retention of TFE3 and inhibits browning of adipose tissue (By similarity). In association with TFEB, 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 MUE3 box, a subset of E-boxes, present in the immunoglobulin enhancer (PubMed:2338243). It also binds very well to a USF/MLTF site (PubMed:2338243). Promotes TGF-beta-induced transcription of COL1A2, via its interaction with TSC22D1 at E-boxes in the gene proximal promoter (By similarity). May regulate lysosomal positioning in response to nutrient deprivation by promoting the expression of PIP4P1 (PubMed:29146937). {ECO:0000250|UniProtKB:Q64092, ECO:0000269|PubMed:2338243, ECO:0000269|PubMed:24448649, ECO:0000269|PubMed:29146937, ECO:0000269|PubMed:30733432, ECO:0000269|PubMed:31672913, ECO:0000269|PubMed:36608670, ECO:0000269|PubMed:37079666}.
Molecular Weight:	61.5 kDa
UniProt:	P19532

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

Handling

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