

Datasheet for ABIN7563957
SIX3 Protein (AA 1-333) (His tag)



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Overview

Quantity:	1 mg
Target:	SIX3
Protein Characteristics:	AA 1-333
Origin:	Mouse
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This SIX3 protein is labelled with His tag.

Product Details

Purpose:	Custom-made recombinant Six3 Protein expressed in mammalian cells.
Sequence:	MVFRSPLDLY SSHFLLPNFA DSHHCSLLLA SSGGGSGASG GGGGAGGGGG GNRAGGGGAG GAGGGSGGGG SRAPPEELSM FQLPTLNFS EQVASV CETL EETGDIERLG RFLWSLPVAP GACEAINKHE SILRARAVVA FHTGNFRDLY HILENHKFTK ESHGKLQAMW LEAHYQAEK LRGRPLGPVD KYRVRKKFPL PRTIWDGEQK THCFKERTRS LLREWYLQDP YPNPSKKREL AQATGLTPTQ VGNWFKNRRQ RDRAAAAKNR LQHQAIGPSG MRSLAEPGCP THGSAESPST AASPTTSVSS LTERADTGTS ILSVTSSDSE CDV 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.
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.
Characteristics:	Key Benefits:

Product Details

- 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.

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

Target Details

Target:	SIX3
Alternative Name:	Six3 (SIX3 Products)
Background:	Homeobox protein SIX3 (Sine oculis homeobox homolog 3),FUNCTION: Transcriptional regulator which can act as both a transcriptional repressor and activator by binding a ATTA homeodomain core recognition sequence on these target genes. During forebrain development represses WNT1 expression allowing zona limitans intrathalamica formation and thereby ensuring proper antero-posterior patterning of the diencephalon and formation of the rostral diencephalon (PubMed:18094027). Acts as a direct upstream activator of SHH expression in the rostral diencephalon ventral midline and that in turn SHH maintains its expression (PubMed:18775421). In addition, Six3 activity is required for the formation of the telencephalon. During postnatal stages of brain development is necessary for ependymal cell maturation by promoting the maturation of radial glia into ependymal cells through regulation of neuroblast proliferation and migration (PubMed:22071110). Acts on the proliferation and differentiation of neural progenitor cells through activating transcription of CCND1 AND CCND2 (PubMed:17576749). During early lens formation plays a role in lens induction and specification by activating directly PAX6 in the presumptive lens ectoderm (PubMed:17066077). In turn PAX6

Target Details

activates SIX3 resulting in activation of PDGFRA and CCND1 promoting cell proliferation (PubMed:12072567). Also is required for the neuroretina development by directly suppressing WNT8B expression in the anterior neural plate territory (PubMed:20890044). Its action during retina development and lens morphogenesis is TLE5 and TLE4-dependent manner. Furthermore, during eye development regulates several genes expression. Before and during early lens development represses the CRYGF promoter by binding a SIX repressor element (PubMed:11139622). Directly activates RHO transcription, or cooperates with CRX or NRL (PubMed:17666527). Six3 functions also in the formation of the proximodistal axis of the optic cup (PubMed:12163408), and promotes the formation of optic vesicles-like structures (PubMed:11458394). During pituitary development, acts in parallel or alternatively with HESX1 to control cell proliferation through Wnt/beta-catenin pathway (PubMed:18694563). Plays a role in eye development by suppressing WNT1 expression and in dorsal-ventral patterning by repressing BMP signaling pathway (By similarity). {ECO:0000250|UniProtKB:O95343, ECO:0000269|PubMed:11139622, ECO:0000269|PubMed:11458394, ECO:0000269|PubMed:12050133, ECO:0000269|PubMed:12072567, ECO:0000269|PubMed:12163408, ECO:0000269|PubMed:12569128, ECO:0000269|PubMed:17066077, ECO:0000269|PubMed:17576749, ECO:0000269|PubMed:17666527, ECO:0000269|PubMed:18094027, ECO:0000269|PubMed:18694563, ECO:0000269|PubMed:18775421, ECO:0000269|PubMed:20682799, ECO:0000269|PubMed:20890044, ECO:0000269|PubMed:22071110}.

Molecular Weight: 35.6 kDa

UniProt: [Q62233](#)

Pathways: [Protein targeting to Nucleus](#)

Application Details

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

Format: Liquid

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

Handling

Handling Advice: Avoid repeated freeze-thaw cycles.

Storage: -80 °C

Storage Comment: Store at -80°C.

Expiry Date: 12 months