Datasheet for ABIN7555206

REST Protein (AA 1-1097) (His tag)

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Overview

Quantity:	1 mg
Target:	REST
Protein Characteristics:	AA 1-1097
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This REST protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Purpose:	Custom-made recombinat REST Protein expressed in mammalien cells.
Sequence:	MATQVMGQSS GGGGLFTSSG NIGMALPNDM YDLHDLSKAE LAAPQLIMLA NVALTGEVNG SCCDYLVGEE RQMAELMPVG DNNFSDSEEG EGLEESADIK GEPHGLENME LRSLELSVVE PQPVFEASGA PDIYSSNKDL PPETPGAEDK GKSSKTKPFR CKPCQYEAES EEQFVHHIRV HSAKKFFVEE SAEKQAKARE SGSSTAEEGD FSKGPIRCDR CGYNTNRYDH YTAHLKHHTR AGDNERVYKC IICTYTTVSE YHWRKHLRNH FPRKVYTCGK CNYFSDRKNN YVQHVRTHTG ERPYKCELCP YSSSQKTHLT RHMRTHSGEK PFKCDQCSYV ASNQHEVTRH ARQVHNGPKP LNCPHCDYKT ADRSNFKKHV ELHVNPRQFN CPVCDYAASK KCNLQYHFKS KHPTCPNKTM DVSKVKLKKT KKREADLPDN ITNEKTEIEQ TKIKGDVAGK KNEKSVKAEK RDVSKEKKPS NNVSVIQVTT RTRKSVTEVK EMDVHTGSNS EKFSKTKKSK RKLEVDSHSL HGPVNDEESS TKKKKKVESK SKNNSQEVPK GDSKVEENKK QNTCMKKSTK KKTLKNKSSK KSSKPPQKEP VEKGSAQMDP PQMGPAPTEA VQKGPVQVEP PPPMEHAQME GAQIRPAPDE PVQMEVVQEG

Product Details

	PAQKELLPPV EPAQMVGAQI VLAHMELPPP METAQTEVAQ MGPAPMEPAQ MEVAQVESAP MQVVQKEPVQ MELSPPMEVV QKEPVQIELS PPMEVVQKEP VKIELSPPIE VVQKEPVQME LSPPMGVVQK EPAQREPPPP REPPLHMEPI SKKPPLRKDK KEKSNMQSER ARKEQVLIEV GLVPVKDSWL LKESVSTEDL SPPSPPLPKE NLREEASGDQ KLLNTGEGNK EAPLQKVGAE EADESLPGLA ANINESTHIS SSGQNLNTPE GETLNGKHQT DSIVCEMKMD TDQNTRENLT GINSTVEEPV SPMLPPSAVE EREAVSKTAL ASPPATMAAN ESQEIDEDEG IHSHEGSDLS DNMSEGSDDS GLHGARPVPQ ESSRKNAKEA LAVKAAKGDF VCIFCDRSFR KGKDYSKHLN RHLVNVYYLE EAAQGQE **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. • 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:	REST
Alternative Name:	REST (REST Products)
Background:	RE1-silencing transcription factor (Neural-restrictive silencer factor) (X2 box repressor),FUNCTION: Transcriptional repressor which binds neuron-restrictive silencer element (NRSE) and represses neuronal gene transcription in non-neuronal cells

(PubMed:12399542, PubMed:26551668, PubMed:7697725, PubMed:7871435, PubMed:8568247, PubMed:11741002, PubMed:11779185). Restricts the expression of neuronal genes by associating with two distinct corepressors, SIN3A and RCOR1, which in turn recruit histone deacetylase to the promoters of REST-regulated genes (PubMed:10449787, PubMed:10734093). Mediates repression by recruiting the BHC complex at RE1/NRSE sites which acts by deacetylating and demethylating specific sites on histones, thereby acting as a chromatin modifier (By similarity). Transcriptional repression by REST-CDYL via the recruitment of histone methyltransferase EHMT2 may be important in transformation suppression (PubMed:19061646). Represses the expression of SRRM4 in non-neural cells to prevent the activation of neural-specific splicing events and to prevent production of REST isoform 3 (By similarity). Repressor activity may be inhibited by forming heterodimers with isoform 3, thereby preventing binding to NRSE or binding to corepressors and leading to derepression of target genes (PubMed:11779185). Also maintains repression of neuronal genes in neural stem cells, and allows transcription and differentiation into neurons by dissociation from RE1/NRSE sites of target genes (By similarity). Thereby is involved in maintaining the quiescent state of adult neural stem cells and preventing premature differentiation into mature neurons (PubMed:21258371). Plays a role in the developmental switch in synaptic NMDA receptor composition during postnatal development, by repressing GRIN2B expression and thereby altering NMDA receptor properties from containing primarily GRIN2B to primarily GRIN2A subunits (By similarity). Acts as a regulator of osteoblast differentiation (By similarity). Key repressor of gene expression in hypoxia, represses genes in hypoxia by direct binding to an RE1/NRSE site on their promoter regions (PubMed:27531581). May also function in stress resistance in the brain during aging, possibly by regulating expression of genes involved in cell death and in the stress response (PubMed:24670762). Repressor of gene expression in the hippocampus after ischemia by directly binding to RE1/NRSE sites and recruiting SIN3A and RCOR1 to promoters of target genes, thereby promoting changes in chromatin modifications and ischemia-induced cell death (By similarity). After ischemia, might play a role in repression of miR-132 expression in hippocampal neurons, thereby leading to neuronal cell death (By similarity). Negatively regulates the expression of SRRM3 in breast cancer cell lines (PubMed:26053433). {ECO:0000250|UniProtKB:O54963, ECO:0000250|UniProtKB:Q8VIG1, ECO:0000269|PubMed:10449787, ECO:0000269|PubMed:10734093, ECO:0000269|PubMed:11741002, ECO:0000269|PubMed:11779185, ECO:0000269|PubMed:12399542, ECO:0000269|PubMed:19061646, ECO:0000269|PubMed:21258371, ECO:0000269|PubMed:24670762, ECO:0000269|PubMed:26053433, ECO:0000269|PubMed:26551668, ECO:0000269|PubMed:27531581, ECO:0000269|PubMed:7697725,

Target Details

	ECO:0000269|PubMed:7871435, ECO:0000269|PubMed:8568247}., FUNCTION: [Isoform 3]: Binds to the 3' region of the neuron-restrictive silencer element (NRSE), with lower affinity than full-length REST isoform 1 (By similarity). Exhibits weaker repressor activity compared to isoform 1 (PubMed:11779185). May negatively regulate the repressor activity of isoform 1 by binding to isoform 1, thereby preventing its binding to NRSE and leading to derepression of target genes (PubMed:11779185). However, in another study, does not appear to be implicated in repressor activity of a NRSE motif-containing reporter construct nor in inhibitory activity on the isoform 1 transcriptional repressor activity (PubMed:11741002). Post-transcriptional inactivation of REST by SRRM4-dependent alternative splicing into isoform 3 is required in mechanosensory hair cells in the inner ear for derepression of neuronal genes and hearing (By similarity). {ECO:0000250|UniProtKB:Q8VIG1, ECO:0000269|PubMed:11741002, ECO:0000269|PubMed:11779185}.
Molecular Weight:	121.9 kDa
UniProt:	Q13127
Pathways:	Negative Regulation of Hormone Secretion, Regulation of Hormone Metabolic Process, Regulation of Hormone Biosynthetic Process, Chromatin Binding, Positive Regulation of Endopeptidase Activity

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