

Datasheet for ABIN7564773
REST Protein (AA 1-1082) (His tag)



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Overview

Quantity:	1 mg
Target:	REST
Protein Characteristics:	AA 1-1082
Origin:	Mouse
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:	<p>MATQVMGQSS GGGSLFNNSA NMGMALTNDM YDLHELKAE LAAPQLIMLA NVALTGEASG SCCDYLVGEE RQMAELMPVG DNHFSESEGE GLEESADLKG LENMELGSLE LSAVEPQPVF EASAAPEIYS ANKDPAPETP VAEDKCRSSK AKPFRCKPCQ YEAEESEQFV HHIRIHSAKK FFVEESAQK AKAWESGSSP AEEGEFSKGP IRCDRCGYNT NRYDHYMAHL KHHLRAGENE RIYKCICTY TTVSEYHWRK HLRNHFPRKV YTCSKCNYS DRKNNYVQHV RTHTGERPYK CELCPYSSSQ KTHLTRHMRT HSGEKPFKCD QCNYVASNQH EVTRHARQVH NGPKPLNCPH CDYKTADRSN FKKHVELHVN PRQFNCPVCD YAASKKCNLQ YHFKSKHPTC PSKTMDVSKV KLKKTKKREA DLLNNAVSNE KMENEQTKTK GDVSGKKNEK PVKAVGKDas KEKPGSSVS VVQVTRTRK SAVAAETKAA EVKHTDGQTG NNPEKPCAK KNKRKKDAEA HPSEEPVNEG PVTKKKKKSE CKSKIGTNVP KGGGRAEERP GVKKQSASLK KGTKKTPPKT KTSKKGKLA PKGMGQTEPS SGALAQVGVs PDPALIQAEV TGSGSSQTEL PSPMDIAKSE PAQMEVSLTG</p>

PPPVEPAQME PSPAKPPQVE APTYPQPPQR GPAPPTGPAP PTGPAPPTTEP APPTGLAEME
PSPTEPSQKE PPPSMEPPCP EELPQAEPPE MEDCQKELPS PVEPAQIEVA QTAPTQVQEE
PPPVSEPPRV KPTKRSSLRK DRAEKELSL SEMARQEQVL MGVGLVPVRD SKLLKGNKSA
QDPPAPPSPS PKGNSREETP KDQEMVSDGE GTIVFPLKKG GPVEEAGESPA ELAALKESAR
VSSSEQNSAM PEGGASHSKC QTGSSGLCDV DTEQKTDTVP MKDSAAEPVS PPTPTVDRDA
GSPAVVASPP ITLAENESQE IDEDEGIHSH DGSDLSDNMS EGSDDSGLHG ARPTPPEATS
KNGKAGLAGK VTEGEFVCIF CDRSFRKEKD YSKHLNRHLV NVYFLEEAAE EQEEQEEREE QE

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 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, Western Blot

Grade:

custom-made

Target Details

Target:

REST

Alternative Name:

Rest ([REST Products](#))

Background:

RE1-silencing transcription factor (Neural-restrictive silencer factor),FUNCTION: Transcriptional repressor which binds neuron-restrictive silencer element (NRSE) and represses neuronal gene transcription in non-neuronal cells (PubMed:29961578, PubMed:9771705). 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 (By similarity). 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 (By similarity). 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 2 (PubMed:21884984). Repressor activity may be inhibited by forming heterodimers with isoform 2, thereby preventing binding to NRSE or binding to corepressors and leading to derepression of target genes (PubMed:10490617, PubMed:11039732). 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 (PubMed:15907476). Thereby is involved in maintaining the quiescent state of adult neural stem cells and preventing premature differentiation into mature neurons (PubMed:27819263). 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 (PubMed:25727884). Key repressor of gene expression in hypoxia, represses genes in hypoxia by direct binding to an RE1/NRSE site on their promoter regions (By similarity). 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). {ECO:0000250|UniProtKB:O54963, ECO:0000250|UniProtKB:Q13127, ECO:0000269|PubMed:10490617, ECO:0000269|PubMed:11039732, ECO:0000269|PubMed:15907476, ECO:0000269|PubMed:21884984, ECO:0000269|PubMed:24670762, ECO:0000269|PubMed:25727884, ECO:0000269|PubMed:27819263, ECO:0000269|PubMed:29961578, ECO:0000269|PubMed:9771705}., FUNCTION: [Isoform 2]: Binds to the 3' region of the neuron-restrictive silencer element (NRSE), with lower affinity than isoform 1 (PubMed:11039732). Exhibits weaker repressor activity compared to isoform 1 (By similarity). 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

Target Details

(PubMed:11039732, PubMed:10490617). 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 (By similarity). Post-transcriptional inactivation of REST by SRRM4-dependent alternative splicing into isoform 2 is required in mechanosensory hair cells in the inner ear for derepression of neuronal genes, maintenance of hair cells and hearing (PubMed:29961578). {ECO:0000250|UniProtKB:Q13127, ECO:0000269|PubMed:10490617, ECO:0000269|PubMed:11039732, ECO:0000269|PubMed:29961578}.

Molecular Weight: 117.8 kDa

UniProt: [Q8VIG1](#)

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