Datasheet for ABIN7555649

SRPK1 Protein (AA 1-655) (His tag)

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Overview

Quantity:	1 mg
Target:	SRPK1
Protein Characteristics:	AA 1-655
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This SRPK1 protein is labelled with His tag.

Product Details

Purpose:	Custom-made recombinant SRPK1 Protein expressed in mammalian cells.
Sequence:	MERKVLALQA RKKRTKAKKD KAQRKSETQH RGSAPHSESD LPEQEEEILG SDDDEQEDPN DYCKGGYHLV KIGDLFNGRY HVIRKLGWGH FSTVWLSWDI QGKKFVAMKV VKSAEHYTET ALDEIRLLKS VRNSDPNDPN REMVVQLLDD FKISGVNGTH ICMVFEVLGH HLLKWIIKSN YQGLPLPCVK KIIQQVLQGL DYLHTKCRII HTDIKPENIL LSVNEQYIRR LAAEATEWQR SGAPPPSGSA VSTAPQPKPA DKMSKNKKKK LKKKQKRQAE LLEKRMQEIE EMEKESGPGQ KRPNKQEESE SPVERPLKEN PPNKMTQEKL EESSTIGQDQ TLMERDTEGG AAEINCNGVI EVINYTQNSN NETLRHKEDL HNANDCDVQN LNQESSFLSS QNGDSSTSQE TDSCTPITSE VSDTMVCQSS STVGQSFSEQ HISQLQESIR AEIPCEDEQE QEHNGPLDNK GKSTAGNFLV NPLEPKNAEK LKVKIADLGN ACWVHKHFTE DIQTRQYRSL EVLIGSGYNT PADIWSTACM AFELATGDYL FEPHSGEEYT RDEDHIALII ELLGKVPRKL IVAGKYSKEF FTKKGDLKHI TKLKPWGLFE VLVEKYEWSQ EEAAGFTDFL LPMLELIPEK RATAAECLRH PWLNS **Sequence without tag. The proposed Purification-Tag is based on experiences with the expression**

Product Details

	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: • 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:	SRPK1
Alternative Name:	SRPK1 (SRPK1 Products)
Background:	SRSF protein kinase 1 (EC 2.7.11.1) (SFRS protein kinase 1) (Serine/arginine-rich protein-specific kinase 1) (SR-protein-specific kinase 1),FUNCTION: Serine/arginine-rich protein-specific kinase which specifically phosphorylates its substrates at serine residues located in regions rich in arginine/serine dipeptides, known as RS domains and is involved in the phosphorylation of SR splicing factors and the regulation of splicing. Plays a central role in the regulatory network for splicing, controlling the intranuclear distribution of splicing factors in interphase cells and the reorganization of nuclear speckles during mitosis. Can influence additional steps of mRNA maturation, as well as other cellular activities, such as chromatin reorganization in somatic and sperm cells and cell cycle progression. Isoform 2 phosphorylates SFRS2, ZRSR2,

Target Details

	LBR and PRM1. Isoform 2 phosphorylates SRSF1 using a directional (C-terminal to N-terminal) and a dual-track mechanism incorporating both processive phosphorylation (in which the kinase stays attached to the substrate after each round of phosphorylation) and distributive phosphorylation steps (in which the kinase and substrate dissociate after each phosphorylation event). The RS domain of SRSF1 binds first to a docking groove in the large lobe of the kinase domain of SRPK1. This induces certain structural changes in SRPK1 and/or RRM2 domain of SRSF1, allowing RRM2 to bind the kinase and initiate phosphorylation. The cycles continue for several phosphorylation steps in a processive manner (steps 1-8) until the last few phosphorylation steps (approximately steps 9-12). During that time, a mechanical stress induces the unfolding of the beta-4 motif in RRM2, which then docks at the docking groove of SRPK1. This also signals RRM2 to begin to dissociate, which facilitates SRSF1 dissociation after phosphorylation is completed. Isoform 2 can mediate hepatitis B virus (HBV) core protein phosphorylation. It plays a negative role in the regulation of HBV replication through a mechanism not involving the phosphorylation of the core protein but by reducing the packaging efficiency of the pregenomic RNA (pgRNA) without affecting the formation of the viral core particles. Isoform 1 and isoform 2 can induce splicing of exon 10 in MAPT/TAU. The ratio of isoform 1/isoform 2 plays a decisive role in determining cell fate in K-562 leukaemic cell line: isoform 2 favors proliferation where as isoform 1 favors differentiation. {ECO:0000269|PubMed:10049757, ECO:0000269|PubMed:10390541, ECO:0000269|PubMed:11509566, ECO:0000269|PubMed:12134018, ECO:0000269|PubMed:14555757, ECO:0000269|PubMed:15034300, ECO:0000269|PubMed:16122776, ECO:0000269|PubMed:16209947, ECO:0000269|PubMed:18155240, ECO:0000269|PubMed:18687337, ECO:0000269|PubMed:19240134, ECO:0000269|PubMed:19477182, ECO:0000269|PubMed:19886675, ECO:0000269|PubMed:20708644, ECO:0000269|PubMed:8208298, ECO:0000269|PubMed:9237760}.
Molecular Weight:	74.3 kDa
UniProt:	Q96SB4
Pathways:	Toll-Like Receptors Cascades

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 Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	12 months