

Anti-SRPK1 antibody

Cat #NB-22-5785 (100 µl)

Cat # NB-22-5785-S (20 µl)

Cat # NB-22-5785-200ul (200 µl)

Description

Rabbit polyclonal to SRPK1.

Product informations

Model	NB-22-5785
Host	Rabbit
Reactivity	Human, Mouse, Rat
Applications	ELISA, WB
Immunogen	Synthesized peptide derived from human SRPK1
Immunogen Region	490-570 aa, Internal
Gene ID	6732
Gene Symbol	SRPK1
Dilution range	WB 1:500-1:2000ELISA 1:40000
Specificity	SRPK1 Polyclonal Antibody detects endogenous levels of SRPK1 protein.
Tissue Specificity	Isoform 2 is predominantly expressed in the testis but is also present at lower levels in heart, ovary, small intestine, liver, kidney, pancreas and skeletal muscle. Isoform 1 is only seen in the testis, at lower levels than isoform 2. Highly expressed in different erythroid and lymphoid cell lines, with isoform 2 being far more abundant than isoform 1.
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Note	For Research Use Only (RUO).
Protein Name	SRSF protein kinase 1 SFRS protein kinase 1 Serine/arginine-rich protein-specific kinase 1 SR-protein-specific kinase 1
Molecular Weight	95 kDa
Clonality	Polyclonal
Conjugation	Unconjugated
Isotype	IgG

Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Concentration	1 mg/ml
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Alternative Names	SRSF protein kinase 1 SFRS protein kinase 1 Serine/arginine-rich protein-specific kinase 1 SR-protein-specific kinase 1
Function	<p>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, 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.</p>
Cellular Localization	Isoform 2: Cytoplasm. Nucleus. Nucleus matrix. Microsome. Shuttles between the nucleus and the cytoplasm. Inhibition of the Hsp90 ATPase activity, osmotic stress and interaction with HHV-1 ICP27 protein can induce its translocation to the nucleus. KAT5/TIP60 inhibits its nuclear translocation.. Isoform 1: Cytoplasm. Nucleus matrix. Microsome. Mainly localized in the microsomal fraction and the cytoplasm, and to a lesser extent in the nuclear matrix.