BRSK1 Protein, Human (Sf9, GST)

Cat. No.:	HY-P701716
Synonyms:	BRSK1; Serine/threonine-protein kinase BRSK1; Brain-selective kinase 1; Brain-specific serine/threonine-protein kinase 1; BR serine/threonine-protein kinase 1; Serine/threonine-protein kinase SAD-B; Synapses of Amphids Defective homolog 1; SAD1 homolog; hSAD1
Species:	Human
Source:	Sf9 insect cells
Accession:	Q8TDC3 (S2-P778)
Gene ID:	84446
Molecular Weight:	

PROPERTIES

Appearance	Solution.
Formulation	Supplied as a 0.22 μm filtered solution of 50 mM Tris-HCl, pH7.5, 200 mM NaCl, 20% glycerol.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	Please use rapid thawing with running water to thaw the protein.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background	BRSK1 Protein functions as a pivotal serine/threonine-protein kinase crucial for the polarization of neurons and centrosome duplication. Upon phosphorylation and activation by STK11/LKB1, BRSK1 assumes a central role in regulating the polarization of cortical neurons, likely through the phosphorylation of microtubule-associated proteins such as MAPT/TAU at 'Thr-529' and 'Ser-579.' Additionally, it participates in neuron polarization by mediating the phosphorylation of WEE1 at 'Ser-642' in postmitotic neurons, leading to the down-regulation of WEE1 activity in polarized neurons. In neurons, BRSK1 localizes to synaptic vesicles and contributes to neurotransmitter release, possibly through the phosphorylation of RIMS1. Furthermore, it acts as a positive regulator of centrosome duplication by phosphorylating gamma-tubulin (TUBG1 and TUBG2) at 'Ser-131,' facilitating the translocation of gamma-tubulin and its associated proteins to the centrosome. BRSK1 also participates in the UV-induced DNA damage checkpoint response, potentially inhibiting CDK1 activity through the phosphorylation and activation of WEE1, along with the inhibition of CDC25B and CDC25C.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA