

BRSK1 Blocking Peptide(Center)
Synthetic peptide
Catalog # BP19765C**Specification**

BRSK1 Blocking Peptide(Center) - Product Information

Primary Accession [Q8TDC3](#)
Other Accession [B2DD29](#), [Q5RJI5](#), [NP_115806.1](#)

BRSK1 Blocking Peptide(Center) - Additional Information

Gene ID 84446

Other Names

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, BRSK1, KIAA1811, SAD1, SADB

Target/Specificity

The synthetic peptide sequence is selected from aa 370-384 of HUMAN BRSK1

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

BRSK1 Blocking Peptide(Center) - Protein Information

Name BRSK1

Synonyms KIAA1811, SAD1, SADB

Function

Serine/threonine-protein kinase that plays a key role in polarization of neurons and centrosome duplication. Phosphorylates CDC25B, CDC25C, MAPT/TAU, RIMS1, TUBG1, TUBG2 and WEE1. Following phosphorylation and activation by STK11/LKB1, acts as a key regulator of polarization of cortical neurons, probably by mediating phosphorylation of microtubule-associated proteins such as MAPT/TAU at 'Thr-529' and 'Ser-579'. Also regulates neuron polarization by mediating phosphorylation of WEE1 at 'Ser-642' in postmitotic neurons, leading to down-regulate WEE1 activity in polarized neurons. In neurons, localizes to synaptic vesicles and plays a role in neurotransmitter release, possibly by phosphorylating RIMS1. Also acts as a positive regulator of centrosome duplication by mediating phosphorylation of gamma-tubulin (TUBG1 and TUBG2) at

'Ser-131', leading to translocation of gamma-tubulin and its associated proteins to the centrosome. Involved in the UV-induced DNA damage checkpoint response, probably by inhibiting CDK1 activity through phosphorylation and activation of WEE1, and inhibition of CDC25B and CDC25C.

Cellular Location

Cytoplasm. Nucleus. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Synapse {ECO:0000250|UniProtKB:B2DD29}. Presynaptic active zone {ECO:0000250|UniProtKB:B2DD29}. Cytoplasmic vesicle, secretory vesicle, synaptic vesicle {ECO:0000250|UniProtKB:B2DD29}. Note=Nuclear in the absence of DNA damage. Translocated to the nucleus in response to UV- or MMS-induced DNA damage (By similarity).

Tissue Location

Widely expressed, with highest levels in brain and testis. Protein levels remain constant throughout the cell cycle

BRSK1 Blocking Peptide(Center) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

BRSK1 Blocking Peptide(Center) - Images**BRSK1 Blocking Peptide(Center) - Background**

Required for the polarization of forebrain neurons which endows axons and dendrites with distinct properties, possibly by locally regulating phosphorylation of microtubule-associated proteins (By similarity). May be involved in the regulation of G2/M arrest in response to UV-or methyl methane sulfonate (MMS)-induced, but not IR-induced, DNA damage. Phosphorylates WEE1 and CDC25B in vitro and CDC25C in vitro and in vivo.

BRSK1 Blocking Peptide(Center) - References

Alvarado-Kristensson, M., et al. Nat. Cell Biol. 11(9):1081-1092(2009)
He, C., et al. Nat. Genet. (2009) In press :
Stolk, L., et al. Nat. Genet. (2009) In press :
Fogarty, S., et al. J. Biol. Chem. 284(1):77-84(2009)
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