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BRSK1 Antibody(Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP19765C

Specification

BRSK1 Antibody(Center) - Product Information

Application	**WB,E**
Primary Accession	Q8TDC3
Other Accession	B2DD29, Q5RJI5, NP_115806.1
Reactivity	**Mouse**
Predicted	**Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**85087**
Antigen Region	**355-384**

BRSK1 Antibody(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
This BRSK1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 355-384 amino acids from the Central region of human BRSK1.

Dilution
WB~~1:1000
E~~Use at an assay dependent concentration.

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
BRSK1 Antibody(Center) is for research use only and not for use in diagnostic or therapeutic procedures.

BRSK1 Antibody(Center) - Protein Information

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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 Antibody(Center) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

BRSK1 Antibody(Center) - Images

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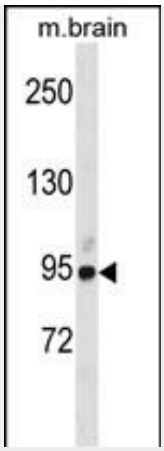

BRSK1 Antibody (Center) (Cat. #AP19765c) western blot analysis in mouse brain tissue lysates (35ug/lane).This demonstrates the BRSK1 antibody detected the BRSK1 protein (arrow).

BRSK1 Antibody(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 Antibody(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)
Bright, N.J., et al. J. Biol. Chem. 283(22):14946-14954(2008)