10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

KIAA1811 / BRSK1 Antibody (C-Terminus)

Rabbit Polyclonal Antibody
Catalog # ALS11273

Specification

KIAA1811 / BRSK1 Antibody (C-Terminus) - Product Information

Application	**WB, IHC-P, IF**
Primary Accession	Q8TDC3
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**85kDa KDa**
Dilution	**WB~~1:1000** **IHC-P~~N/A** **IF~~1:50~200**

KIAA1811 / BRSK1 Antibody (C-Terminus) - Additional Information

Gene ID 84446

Other Names
Serine/threonine-protein kinase BRSK1, 2.7.11.1, Brain-selective kinase 1, 2.7.11.26, 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
28 amino acid peptide from near the carboxy terminus of human BRSK1.

Reconstitution & Storage
Short term 4°C, long term aliquot and store at -20°C, avoid freeze thaw cycles. Store undiluted.

Precautions
KIAA1811 / BRSK1 Antibody (C-Terminus) is for research use only and not for use in diagnostic or therapeutic procedures.

KIAA1811 / BRSK1 Antibody (C-Terminus) - 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).

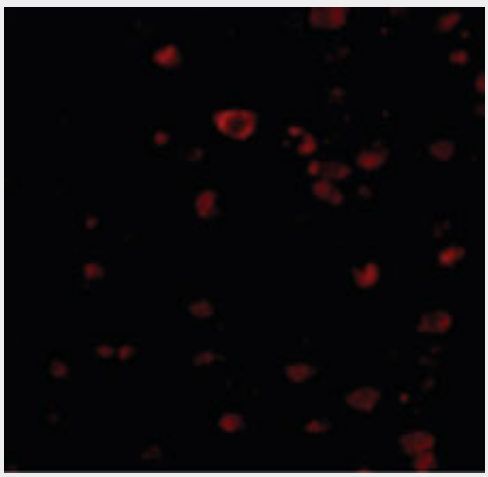
Tissue Location
Widely expressed, with highest levels in brain and testis. Protein levels remain constant throughout the cell cycle

KIAA1811 / BRSK1 Antibody (C-Terminus) - Protocols

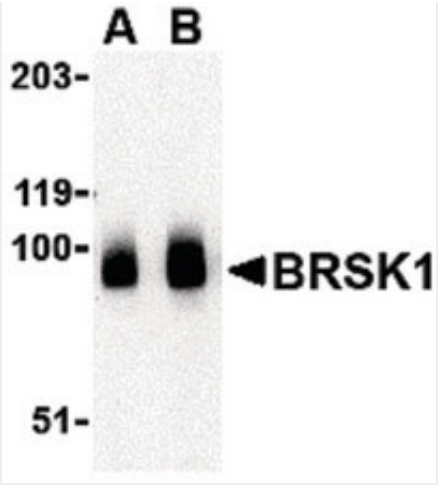
Provided below are standard protocols that you may find useful for product applications.

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

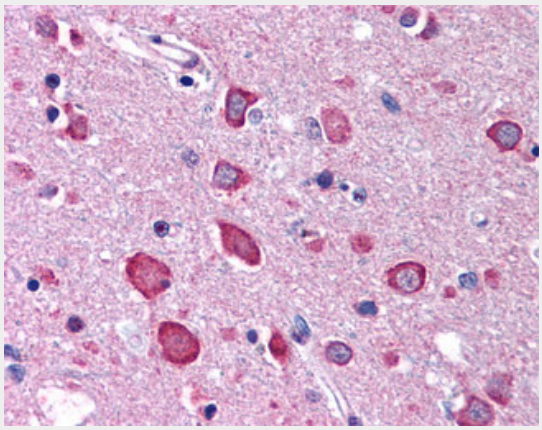
KIAA1811 / BRSK1 Antibody (C-Terminus) - Images



Immunofluorescence of BRSK1 in Human Brain cells with BRSK1 antibody at 20 ug/ml.



Western blot of BRSK1 in human brain tissue lysate with BRSK1 antibody at (A) 0.5 and (B) 1 ug/ml.



Anti-BRSK1 antibody IHC of human brain, cortex.

KIAA1811 / BRSK1 Antibody (C-Terminus) - Background

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 post-mitotic 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.

KIAA1811 / BRSK1 Antibody (C-Terminus) - References

Lizcano J.M.,et al.EMBO J. 23:833-843(2004).
Lu R.,et al.J. Biol. Chem. 279:31164-31170(2004).
Inoue E.,et al.Neuron 50:261-275(2006).
Alvarado-Kristensson M.,et al.Nat. Cell Biol. 11:1081-1092(2009).
She X.Y.,et al.Submitted (FEB-2002) to the EMBL/GenBank/DDBJ databases.

10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999