


#5935 Store at -20C

BRSK1 (D10F2) Rabbit mAb



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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP	H M R	Endogenous	90	Rabbit IgG	#Q8TDC3	84446

Product Usage Information

Application

Western Blotting

Immunoprecipitation

Dilution

1:1000

1:50

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Specificity / Sensitivity

BRSK1 (D10F2) Rabbit mAb detects endogenous levels of total BRSK1 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gly485 of human BRSK1 protein.

Background

Brain-specific kinase 1 (BRSK1; SAD-B) and **Brain-specific kinase 2** (BRSK2; SAD-A) are serine/threonine kinases closely related to AMPK. LKB1 phosphorylates Thr189 in the T-loop of BRSK1 and Thr174 in the T-loop of BRSK2, resulting in activation of the kinases (1). BRSK1 localizes to synaptic vesicles in the hippocampus and cerebellum, together with the active zone proteins Bassoon and CAST, and BRSK1 phosphorylates the active zone protein RIM1 (2). An alternatively spliced form of BRSK1 displays unique activity during the cell cycle, phosphorylating Ser131 of γ-tubulin and controlling centrosome duplication (3). Neuronal polarization, including axon formation, is fundamental for normal brain development. BRSK1 ^{-/-} and BRSK2 ^{-/-} mice have defects in neuronal polarity and impaired corticogenesis (4). Knockdown of BRSK1 and BRSK2 *in vitro* diminishes axonal growth (5).

Background References

- Bright, N.J. et al. (2008) *J Biol Chem* 283, 14946-54.
- Inoue, E. et al. (2006) *Neuron* 50, 261-75.
- Alvarado-Kristensson, M. et al. (2009) *Nat Cell Biol* 11, 1081-92.
- Kishi, M. et al. (2005) *Science* 307, 929-32.
- Choi, Y.J. et al. (2008) *Genes Dev* 22, 2485-95.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

WB: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster **X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse **GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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