Technical Data Sheet

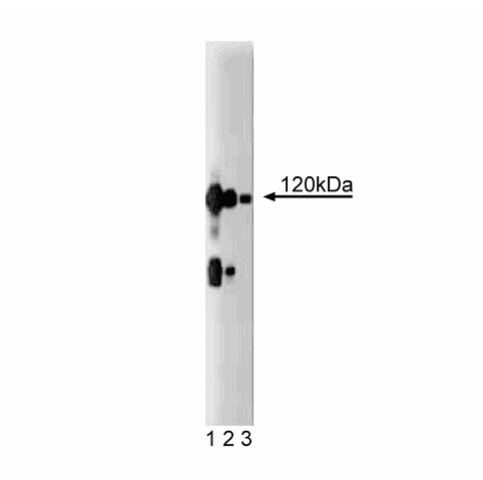
Purified Mouse Anti-CASK

Product Information

Material Number:	**610782**
Size:	50 µg
Concentration:	250 µg/ml
Clone:	7/CASK
Immunogen:	Rat CASK aa. 353-486
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Rat Tested in Development: Mouse, Human, Dog, Frog
Target MW:	120 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

CASK is a recently identified cytosolic protein kinase with homology to the Ca2+/CaM-dependent kinases and the synaptic associated proteins SAPs/PSDs. Like the SAPs, CASK contains a PDZ domain, an SH3 region, and a guanylate kinase domain. However, unlike the rest of the PDZ protein family, the amino terminus of CASK has significant homology with the Ca2+/Calmodulin-dependent kinases. Although widely expressed, CASK is highly enriched in the synaptic plasma membrane where it associates with neurexins, the neuronal cell surface proteins. Neurexins are a complex family of surface proteins that act as receptors for a number of venoms and toxins and regulate the clustering of several ion channels at the synapse. In addition, neurexins bind heterotypically to neuroligins, therefore adjoining different cell types. Neuroligins bind intracellularly to PSD95 and related proteins, whereas neurexins bind to CASK through their C-terminal region and at CASK's PDZ domain. The interaction of neurexins and CASK at the outside of the cell may modulate CASK's activity and trigger an intracellular signaling cascade.



Western blot analysis of CASK on a rat cerebrum lysate. *Lane 1:500, lane 2: 1:1000, lane 3: 1:2000 dilution of the mouse anti-CASK antibody.*

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
Store undiluted at -20° C.

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Application Notes

Application

Western blot	Routinely Tested
Immunofluorescence	Tested During Development
Immunoprecipitation	Not Recommended
Immunohistochemistry	Not Recommended

Recommended Assay Procedure:

Western blot: Please refer to http://www.bdbiosciences.com/pharmingen/protocols/Western_Blotting.shtml

Suggested Companion Products

Catalog Number	Name	Size	Clone
611463	Rat Cerebrum Lysate	500 µg	(none)
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)
554001	FITC Goat Anti-Mouse Ig	0.5 mg	Polyclonal

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

Biederer T, Sudhof TC. CASK and protein 4.1 support F-actin nucleation on neurexins. *J Biochem (Tokyo).* 2001; 276(51):47869-47876.(Biology: Western blot)

Borg JP, Lõpez-Figueroa MO, de Taddèo-Borg M. Molecular analysis of the X11-mLin-2/CASK complex in brain. *J Neurosci.* 1999; 19(4):1307-1316.(Biology: Western blot)

Fallon L, Moreau F, Croft BG, Labib N, Gu WJ, Fon EA. Parkin and CASK/LIN-2 associate via a PDZ-mediated interaction and are co-localized in lipid rafts and postsynaptic densities in brain. *J Biol Chem.* 2002; 277(1):486-491.(Biology: Immunofluorescence, Western blot)

Hata Y, Butz S, Südhof TC. CASK: a novel dlg/PSD95 homolog with an N-terminal calmodulin-dependent protein kinase domain identified by interaction with neurexins. *J Neurosci.* 1996; 16(8):2488-2494.(Biology)

Irie M, Hata Y, Takeuchi M. Binding of neuroligins to PSD-95. *Science.* 1997; 277(5331):1511-1515.(Biology)