

# CASK (7): sc-135857

## BACKGROUND

The MAGUK (membrane-associated guanylate kinase homologs) family of proteins contain multiple protein-binding domains and are involved in cell junction organization, tumor suppression, and signaling. CASK (also designated LIN-2) belongs to a MAGUK subfamily which is characterized by a novel domain structure that consists of a calcium/calmodulin-dependent protein kinase domain followed by PDZ, SH3 and guanylate kinase-like (GUK) domains. CASK is expressed in rat brain where it binds to cell-surface proteins, such as neurexin and syndecan, and is thought to be involved in signaling at neuronal synapses. CASK translocates to the nucleus and interacts with TBR-1 to form a complex, which binds to a specific DNA sequence (the T-element), and induces the expression of specific genes, including Reelin. CASK displays a transcription regulation function, which appears crucial for cerebrocortical development.

## REFERENCES

1. Hata, Y., et al. 1996. CASK: a novel dlg/PSD-95 homolog with an N-terminal calmodulin-dependent protein kinase domain identified by interaction with neuexins. *J. Neurosci.* 16: 2488-2494.
2. Dimitratos, S.D., et al. 1997. Camguk, LIN-2, and CASK: novel membrane-associated guanylate kinase homologs that also contain CaM kinase domains. *Mech. Dev.* 63: 127-130.
3. Cohen, A.R., et al. 1998. Human CASK/LIN-2 binds Syndecan-2 and protein 4.1 and localizes to the basolateral membrane of epithelial cells. *J. Cell Biol.* 142: 129-138.
4. Hsueh, Y.P., et al. 1998. Direct interaction of CASK/LIN-2 and syndecan heparan sulfate proteoglycan and their overlapping distribution in neuronal synapses. *J. Cell Biol.* 142: 139-151.
5. Hsueh, Y.P., et al. 1999. Regulated expression and subcellular localization of syndecan heparan sulfate proteoglycans and the syndecan-binding protein CASK/LIN-2 during rat brain development. *J. Neurosci.* 19: 7415-7425.
6. Bredt, D.S. 2000 Reeling CASK into the nucleus. *Nature* 404: 241-242.
7. Hsueh, Y.P., et al. 2000. Nuclear translocation and transcription regulation by the membrane-associated guanylate kinase CASK/LIN-2. *Nature* 404: 298-302.

## CHROMOSOMAL LOCATION

Genetic locus: CASK (human) mapping to Xp11.4; Cask (mouse) mapping to X A1.1.

## SOURCE

CASK (7) is a mouse monoclonal antibody raised against amino acids 353-486 of CASK of rat origin.

## PRODUCT

Each vial contains 50 µg IgG<sub>1</sub> in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

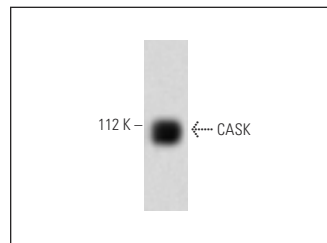
CASK (7) is recommended for detection of CASK of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500); not recommended for immunoprecipitation.

Suitable for use as control antibody for CASK siRNA (h): sc-29920, CASK siRNA (m): sc-29921, CASK shRNA Plasmid (h): sc-29920-SH, CASK shRNA Plasmid (m): sc-29921-SH, CASK shRNA (h) Lentiviral Particles: sc-29920-V and CASK shRNA (m) Lentiviral Particles: sc-29921-V.

Molecular Weight of CASK: 112 kDa.

Positive Controls: rat brain extract: sc-2392, MIA PaCa-2 cell lysate: sc-2285 or DU 145 cell lysate: sc-2268.

## DATA



CASK (7): sc-135857. Western blot analysis of CASK expression in rat cerebrum tissue extract.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures. Not for resale.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.