

CASK (C-6): sc-13158

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 neuexin 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.

CHROMOSOMAL LOCATION

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

SOURCE

CASK (C-6) is a mouse monoclonal antibody raised against amino acids 353-459 of CASK of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CASK (C-6) is available conjugated to agarose (sc-13158 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-13158 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-13158 PE), fluorescein (sc-13158 FITC), Alexa Fluor[®] 488 (sc-13158 AF488), Alexa Fluor[®] 546 (sc-13158 AF546), Alexa Fluor[®] 594 (sc-13158 AF594) or Alexa Fluor[®] 647 (sc-13158 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-13158 AF680) or Alexa Fluor[®] 790 (sc-13158 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

CASK (C-6) is recommended for detection of CASK of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:500), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

CASK (C-6) is also recommended for detection of CASK in additional species, including equine, canine, bovine, porcine and avian.

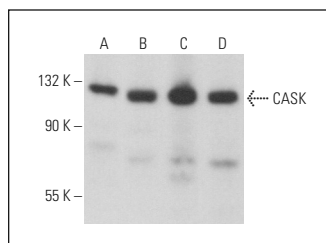
Suitable for use as control antibody for CASK siRNA (h): sc-29920, CASK siRNA (m): sc-29921, CASK shRNA Plasmid (h): sc-29920-SH, CASK shRNA Plasmid (m): sc-29921-SH, CASK shRNA (h) Lentiviral Particles: sc-29920-V and CASK shRNA (m) Lentiviral Particles: sc-29921-V.

Molecular Weight of CASK: 112 kDa.

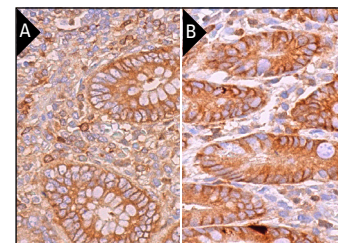
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



CASK (C-6): sc-13158. Western blot analysis of CASK expression in DU 145 (A) and AtT-20/D16V-F2 (B) whole cell lysates and rat brain (C) and human brain (D) tissue extracts.



CASK (C-6): sc-13158. Immunoperoxidase staining of formalin fixed, paraffin-embedded human appendix tissue showing cytoplasmic staining of glandular cells and lymphoid cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing membrane and cytoplasmic staining of glandular cells (B).

SELECT PRODUCT CITATIONS

- Qi, J., et al. 2005. CASK inhibits ECV304 cell growth and interacts with Id1. *Biochem. Biophys. Res. Commun.* 328: 517-521.
- Watkins, R.J., et al. 2013. A novel interaction between FRMD7 and CASK: evidence for a causal role in idiopathic infantile nystagmus. *Hum. Mol. Genet.* 22: 2105-2118.
- Porter, A.P., et al. 2019. The interaction between CASK and the tumour suppressor Dlg1 regulates mitotic spindle orientation in mammalian epithelia. *J. Cell Sci.* 132: jcs230086.
- Sheel, A., et al. 2020. Acheron/Larp6 is a survival protein that protects skeletal muscle from programmed cell death during development. *Front. Cell Dev. Biol.* 8: 622.
- Zhang, K., et al. 2020. CASK, APBA1, and STXBP1 collaborate during Insulin secretion. *Mol. Cell. Endocrinol.* E-published.

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.