

# CASK Antibody

Catalog # ASC11505

## Product Information

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| Application           | WB, IF, E                                                                                                                          |
| Primary Accession     | <a href="#">O14936</a>                                                                                                             |
| Other Accession       | <a href="#">NP_003679</a> , <a href="#">186972120</a>                                                                              |
| Reactivity            | Human, Mouse, Rat                                                                                                                  |
| Host                  | Rabbit                                                                                                                             |
| Clonality             | Polyclonal                                                                                                                         |
| Isotype               | IgG                                                                                                                                |
| Calculated MW         | 105123                                                                                                                             |
| Concentration (mg/ml) | 1 mg/mL                                                                                                                            |
| Conjugate             | Unconjugated                                                                                                                       |
| Application Notes     | CASK antibody can be used for detection of CASK by Western blot at 1 $\mu$ g/mL.<br>For immunofluorescence start at 20 $\mu$ g/mL. |

## Additional Information

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| Gene ID                  | 8573                                                                                                                                                                                                                                         |
| Other Names              | Peripheral plasma membrane protein CASK, hCASK, 2.7.11.1, Calcium/calmodulin-dependent serine protein kinase, Protein lin-2 homolog, CASK, LIN2                                                                                              |
| Target/Specificity       | CASK; At least six alternatively spliced transcript variants have been observed.                                                                                                                                                             |
| Reconstitution & Storage | CASK antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures. |
| Precautions              | CASK Antibody is for research use only and not for use in diagnostic or therapeutic procedures.                                                                                                                                              |

## Protein Information

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| Name     | CASK ( <a href="#">HGNC:1497</a> )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Synonyms | LIN2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Function | Multidomain scaffolding Mg(2+)-independent protein kinase that catalyzes the phosphotransfer from ATP to proteins such as NRXN1, and plays a role in synaptic transmembrane protein anchoring and ion channel trafficking (PubMed: <a href="#">18423203</a> ). Contributes to neural development and regulation of gene expression via interaction with the transcription factor TBR1. Binds to cell-surface proteins, including amyloid precursor protein, neuroligins and syndecans. May mediate a link between the extracellular matrix and the actin |

cytoskeleton via its interaction with syndecan and with the actin/spectrin-binding protein 4.1. Component of the LIN-10-LIN-2-LIN-7 complex, which associates with the motor protein KIF17 to transport vesicles containing N-methyl-D- aspartate (NMDA) receptor subunit NR2B along microtubules (By similarity).

#### Cellular Location

Nucleus {ECO:0000250|UniProtKB:Q62915}. Cytoplasm {ECO:0000250|UniProtKB:Q62915}. Cell membrane {ECO:0000250|UniProtKB:Q62915}; Peripheral membrane protein {ECO:0000250|UniProtKB:Q62915}

#### Tissue Location

Ubiquitous. Expression is significantly greater in brain relative to kidney, lung, and liver and in fetal brain and kidney relative to lung and liver.

## Background

**CASK Antibody:** CASK (Calcium/calmodulin-dependent serine protein kinase), a conserved multi-domain scaffolding protein, belongs to a MAGUK (membrane-associated guanylate kinase homologs) subfamily and is involved in cell junction organization, tumor suppression and signaling. It 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 ubiquitously expressed and significantly greater in brain where it is thought to be involved in signaling at neuronal synapses. CASK interacts with CASKINs and defects in CASK are the cause of mental retardation X-linked CASK-related.

## References

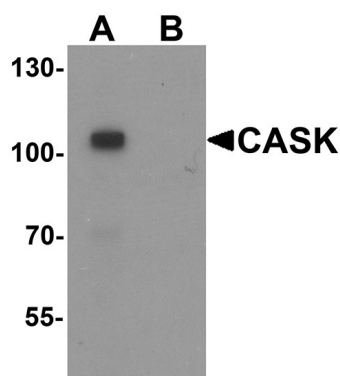
Dimitratos SD, Woods DF, and Bryant PJ. Camguk, Lin-2, and CASK: novel membrane associated guanylate kinase homologs that also contain CaM kinase domains. *Mech. Dev.* 1997; 63:127-30.

Hsueh YP and Sheng M. Regulated expression and subcellular localization of syndecan heparan sulfate proteoglycans and the syndecan-binding protein CASK/LIN-2 during rat brain development. *J. Neurosci.* 1999;19:7415-25.

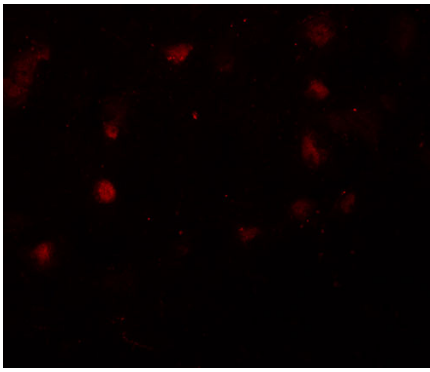
Tabuchi K, Biederer T, Butz S, et al. CASK participates in alternative tripartite complexes in which Mint 1 competes for binding with CASKIN2, a novel CASK-binding protein. *J. Neurosci.* 2002; 22:4264-73.

Kuo TY, Hong CJ, Chien HL, et al. X-linked mental retardation gene CASK interacts with Bcl11A/CTIP1 and regulates axon branching and outgrowth. *J. Neurosci. Res.* 2010; 88: 2364-73.

## Images



Immunofluorescence of CASK in human brain tissue with CASK antibody at 20 µg/mL.



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