

# calsyntenin-1 (m): 293T Lysate: sc-125091

## BACKGROUND

Members of the calsyntenin protein family are localized to the post-synaptic membrane of excitatory central nervous system (CNS) synapses. Calsyntenin-1, also known as CSTN1, PIK3CD, Alzheimer-related cadherin-like protein, non-classical cadherin XB31 $\alpha$ , KIAA0911, ALC- $\alpha$ , alca $\alpha$ 1, alca $\alpha$ 2 or FLJ32258, is a 981 amino acid single-pass type I membrane protein that localizes to the membrane of endoplasmic reticulum, Golgi apparatus, cell projections and postsynaptic cells. Expressed in brain, calsyntenin-1 is also found at lower levels in placenta, skeletal muscle, heart and kidney. Calsyntenin-1 binds synaptic Ca<sup>2+</sup> with its cytoplasmic domain and plays a role in extracellular proteolysis. Calsyntenin-1 is also known to form a complex with X11 $\beta$  and APP to suppress the metabolic cleavage of APP, and docks vesicular cargo to KLC1. Calsyntenin-1 may be related to the development or progression of Alzheimer's disease, and two calsyntenin-1 isoforms are produced as a result of alternative splicing events.

## REFERENCES

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2. Hintsch, G., et al. 2002. The calsyntenins — a family of postsynaptic membrane proteins with distinct neuronal expression patterns. *Mol. Cell. Neurosci.* 21: 393-409.
3. Araki, Y., et al. 2003. Novel cadherin-related membrane proteins, Alcadeins, enhance the X11-like protein-mediated stabilization of amyloid  $\beta$ -protein precursor metabolism. *J. Biol. Chem.* 278: 49448-49458.
4. Araki, Y., et al. 2004. Coordinated metabolism of Alcadein and amyloid  $\beta$ -protein precursor regulates FE65-dependent gene transactivation. *J. Biol. Chem.* 279: 24343-24354.
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6. Araki, Y., et al. 2007. The novel cargo Alcadein induces vesicle association of kinesin-1 motor components and activates axonal transport. *EMBO J.* 26: 1475-1486.
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## CHROMOSOMAL LOCATION

Genetic locus: Clstn1 (mouse) mapping to 4 E2.

## PRODUCT

calsyntenin-1 (m): 293T Lysate represents a lysate of mouse calsyntenin-1 transfected 293T cells and is provided as 100  $\mu$ g protein in 200  $\mu$ l SDS-PAGE buffer.

## STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

## APPLICATIONS

calsyntenin-1 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive calsyntenin-1 antibodies. Recommended use: 10-20  $\mu$ l per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

## RESEARCH USE

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

## PROTOCOLS

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