

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Calsyntenin-2 in direct ELISAs. In direct ELISAs, less than 1% cross-reactivity with recombinant human (rh) Calsyntenin-1 and rhCalsyntenin-3 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Calsyntenin-2 Ser21-Thr834 (Val366Ile) Accession # Q9H4D0
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

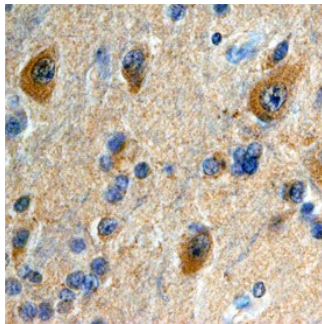
APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Immunohistochemistry	5-15 µg/mL	See Below

DATA

Immunohistochemistry



Calsyntenin-2 in Human Brain.

Calsyntenin-2 was detected in immersion fixed paraffin-embedded sections of human brain (cortex) using Sheep Anti-Human Calsyntenin-2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5480) at 10 µg/mL overnight at 4 °C. Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained using the Anti-Sheep HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS019) and counterstained with hematoxylin (blue). Specific staining was localized to neurons. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.2 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Calsyntenin-2 (CS-2) is a 120-135 kDa member of the Alcadein family of molecules. It is expressed in the ER/Golgi, and the plasma membranes of almost all neurons. It is a calcium-binding protein that interacts with APP and X11L. In this regard, it appears to regulate APP cleavage and gene activation, and likely impacts post-synaptic signaling. Notably, when cleaved in a manner similar to APP, its intracellular fragment antagonizes AICD gene activation. Mature human CS-2 is a 935 amino acid (aa) type I transmembrane protein. It contains two cadherin domains (aa 44-280) in its extracellular region (aa 21-831) and a 103 aa cytoplasmic tail. Proteolytic cleavage by ADAM10 occurs between His803 and Leu804 to generate a 105-110 kDa extracellular fragment. Additional processing of the transmembrane fragment by γ-secretase creates a 3 kDa fragment (aa 804-834) plus a 25 kDa cytoplasmic protein. Potential isoform variants show a premature truncation after Gln608, and the use of an alternative start site at Met409. Over aa 21-834, human CS-2 shares 95% aa identity with mouse CS-2.