

#### DESCRIPTION

|                           |                                                                                                                                                                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Human                                                                                                                                                                                                                                                                       |
| <b>Specificity</b>        | 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.                                                                                                    |
| <b>Source</b>             | Polyclonal Sheep IgG                                                                                                                                                                                                                                                        |
| <b>Purification</b>       | Antigen Affinity-purified                                                                                                                                                                                                                                                   |
| <b>Immunogen</b>          | Mouse myeloma cell line NS0-derived recombinant human Calsyntenin-2<br>Ser21-Thr834 (Val366Ile)<br>Accession # Q9H4D0                                                                                                                                                       |
| <b>Conjugate</b>          | Alexa Fluor 750<br>Excitation Wavelength: 749 nm<br>Emission Wavelength: 775 nm                                                                                                                                                                                             |
| <b>Formulation</b>        | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide<br><br>*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |

#### 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.

**Immunohistochemistry** Optimal dilution of this antibody should be experimentally determined.

#### PREPARATION AND STORAGE

**Shipping** The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

**Stability & Storage** Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

#### 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.

#### PRODUCT SPECIFIC NOTICES

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