

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human SHANK2 in direct ELISAs.
Source	Monoclonal Mouse IgG ₁ Clone # 711924
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human SHANK2 Lys849-Thr1029 Accession # Q9UPX8
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 as a 0.2 µm filtered solution in PBS.

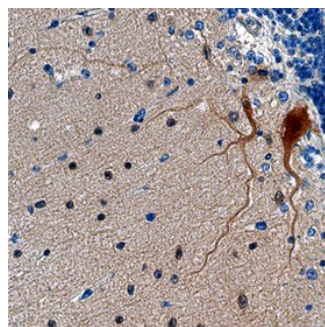
APPLICATIONS

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	8-25 µg/mL	See Below

DATA

Immunohistochemistry



SHANK2 in Human Brain. SHANK2 was detected in immersion fixed paraffin-embedded sections of human brain (cerebellum) using Mouse Anti-Human SHANK2 Monoclonal Antibody (Catalog # MAB7035) at 15 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-Mouse HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS002) and counterstained with hematoxylin (blue). Specific staining was localized to Purkinje neurons. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 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

SHANK2 (SH3 and multiple ANKyrin repeat domain protein 2; also CortBP1 and ProSAP1) is a 180-200 kDa member of the Shank family of proteins. It is expressed in neurons and various epithelial cells, and serves as a multidomain scaffold for cell membrane proteins. For example, in the post-synaptic density of neurons, it provides support for the interaction between glutamate receptors and the actin cytoskeleton. In epithelia, SHANK2 regulates the trafficking and activity of Na/H Exchanger 3. Human SHANK2 is 1470 amino acids (aa) in length. It contains an N-terminal SH3 domain (aa 147-206), a PDZ domain (aa 247-341), a Pro-rich region (aa 509-535), a potential O-linked glycosylation site (aa 948-954) and a C-terminal SAM domain (aa 1407-1470). There are seven potential Ser/Thr phosphorylation sites. Multiple splice forms exist. A 220-240 kDa ankyrin repeat-containing isoform (SHANK2-E) possesses a 391 aa substitution for aa 1-12, and a 165 kDa isoform (potentially known as CortBP1) shows a 28 aa substitution for aa 1-238 coupled with a deletion of aa 383-390. Another potential isoform shows the previously noted 28 aa substitution for aa 1-238 coupled to a 19 aa substitution for aa 472-1470. Over aa 849-1029, human SHANK2 shares 80% aa sequence identity with mouse SHANK2.