

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human SHANK2 in direct ELISAs.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
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.

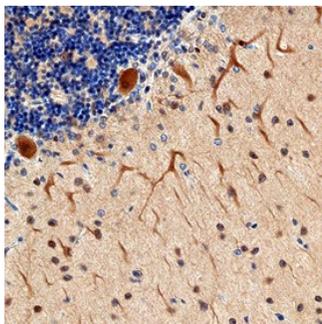
APPLICATIONS

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	5-15 µg/mL	See Below

DATA

Immunohistochemistry



SHANK2 in Human Brain. SHANK2 was detected in immersion fixed paraffin-embedded sections of human brain (cerebellum) using Sheep Anti-Human SHANK2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7035) at 3 µg/mL overnight at 4 °C. 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 cell bodies and processes in 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 0.2 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

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 PSD of neurons, it provides support for the interaction between glutamate receptors and the actin cytoskeleton. In epithelium, SHANK2 regulates the trafficking and activity of Na/H Exchanger 3 (NHE3). Human SHANK2 (sometimes known as ProSAP1) is 1470 amino acids (aa) in length. It contains an N-terminal SH3 domain (aa 147-206), one PDZ domain (aa 247-341), a Pro-rich region (aa 509-535), one 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. There is a 220-240 kDa ankyrin repeat-containing isoform (SHANK2-E) that possesses a 391 aa substitution for aa 1-12, and a 165 kDa isoform (potentially known as CortBP1) that 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 identity with mouse SHANK2.