

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Nicastrin Isoform 1 in direct ELISAs and Western blots.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human Nicastrin Isoform 1 Asn34-Glu669 Accession # Q92542
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.

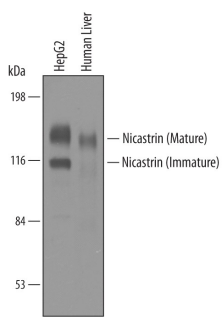
APPLICATIONS

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
Western Blot	1 µg/mL	See Below
Immunohistochemistry	5-15 µg/mL	See Below

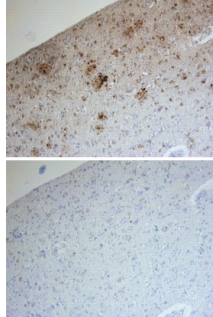
DATA

Western Blot



Detection of Human Nicastrin Isoform 1 by Western Blot. Western blot shows lysates of HepG2 human hepatocellular carcinoma cell line and human liver tissue. PVDF membrane was probed with 1 µg/mL of Sheep Anti-Human Nicastrin Isoform 1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5378) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for Nicastrin Isoform 1 at approximately 150 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 8.

Immunohistochemistry



Nicastrin in Human Alzheimer's Disease Brain. Nicastrin was detected in immersion fixed paraffin-embedded sections of human Alzheimer's disease brain (cortex) using 1.7 µg/mL Sheep Anti-Human Nicastrin Isoform 1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5378) overnight at 4 °C. Tissue was stained with the Anti-Sheep HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS019) and counterstained with hematoxylin (blue). Lower panel shows a lack of labeling if primary antibodies are omitted and tissue is stained only with secondary antibody followed by incubation with detection reagents. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
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

Nicastrin (NCT) is a 150-160 kDa member of the nicastrin family of proteins. It is a component of the aspartyl protease γ-secretase complex and serves to stabilize and direct γ-secretase components to proper positions in the plasma membrane. The γ-secretase complex mediates the cleavage of intramembrane proteins such as notch-1 and APP. Mature human nicastrin is a 676 amino acid type I transmembrane glycoprotein. It contains a 636 aa extracellular domain (aa 34-669) that shows a 58 aa sequence (aa 312-369) which interacts with γ-secretase substrates. There are multiple splice variants of NCT. One shows a deletion of aa 195-322 and 394-709, a second shows a 29 aa substitution for the C-terminal 604 aa and a third shows a deletion of aa 200-709 accompanied by an insertion of 33 aa after Leu30. Over aa 34-669, human NCT shares 90% aa identity with mouse NCT.