abcam

ab275621

PE Anti-Nicastrin antibody [002]

Recombinant

Key facts

Isotype	IgG
Host species	Rabbit
Conjugation	PE
Excitation/Emission	Ex: 480;565nm, Em: 578nm
Storage buffer	Preservative: 0.09% Sodium azide Constituents: 0.5% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	Recombinant Fragment Protein within Human NCSTN aa 1-700. The exact immunogen used to generate this antibody is proprietary information. Database link Q92542
Clone number	002
Purification technique	Affinity purification Protein A
Concentration	0.1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Human

Dilution info	-
Notes	10 µl/Test

Target data

See full target information NCSTN

Function	Essential subunit of the gamma-secretase complex, an endoprotease complex that catalyzes the intramembrane cleavage of integral membrane proteins such as Notch receptors and APP (amyloid-beta precursor protein) (PubMed:10993067, PubMed:12679784, PubMed:25043039, PubMed:26280335, PubMed:30598546, PubMed:30630874). The gamma-secretase complex plays a role in Notch and Wnt signaling cascades and regulation of downstream processes via its role in processing key regulatory proteins, and by regulating cytosolic CTNNB1 levels.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze, Store in the dark

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Nicastrin also known as NAS is an integral component of the gamma-secretase complex. This protein interacts mechanically by assisting in substrate recognition and stabilization within the complex. Nicastrin has a molecular weight of approximately 75 kDa. It is predominantly expressed in various tissues including the brain where it plays significant role in neuronal functions.
Biological function summary	Nicastrin functions as a part of the gamma-secretase complex which also includes presenilin anterior pharynx defective 1 (APH-1) and presenilin enhancer 2 (PEN-2). This complex is essential for intramembrane proteolysis of type I membrane proteins such as amyloid precursor protein (APP) and Notch. The activity of nicastrin influences processes like synaptic organization and neuronal development.
Pathways	Gamma-secretase activity facilitated by nicastrin is central in the Notch signaling pathway and the amyloidogenic pathway. In the Notch pathway it helps release the Notch intracellular domain important for T-cell development. In the

	amyloidogenic pathway the complex processes APP contributing to amyloid-beta peptide formation. Beta-secretase (BACE1) also plays an important role in this pathway acting upstream of gamma-secretase.
Associated diseases and disorders	The imbalance in nicastrin function connects it to Alzheimer's disease and certain cancers. Its role in amyloid-beta peptide production links nicastrin to Alzheimer's disease pathogenesis. In cancer the deregulation of Notch signaling in which nicastrin is involved influences tumor progression and survival. The interaction of nicastrin with presenilin is particularly notable in these conditions further emphasizing its significance in disease mechanisms.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

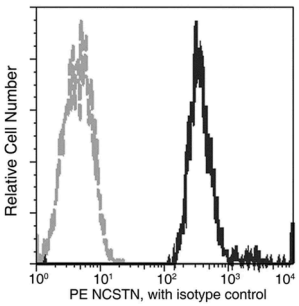
We do not recommend this combination. It is not covered by our product promise.

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1 product image



Flow Cytometry - PE Anti-Nicastrin antibody [002] (ab275621)

Nicastrin Flow Cytometry staining using rabbit Anti-Nicastrin antibody

Flow cytometric analysis of HepG2 (human liver hepatocellular carcinoma cell line) cells labeling Nicastrin with ab275621 (Black) compared with an isotype control (Grey).

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