

Technical Data Sheet

Purified Mouse Anti-Nicastrin

Product Information

Material Number:	612290
Size:	50 µg
Concentration:	250 µg/ml
Clone:	35/Nicastrin
Immunogen:	Human Nicastrin aa. 168-289
Isotype:	Mouse IgG2a
Reactivity:	QC Testing: Human Tested in Development: Chicken, Dog, Mouse, Rat
Target MW:	110 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

Amyloid precursor protein (APP) gene encodes multiple APPs ranging from 695 to 770 amino acids. The unprocessed form of APP is a putative cell surface receptor that possesses neurite-promoting activity, and is involved in synaptic vesicle recycling. Processing of APP by sequential enzymatic activity of β - and γ -secretase, and the presenilin proteins PS1 and PS2, produces APP fragments that may have unique functions. β -secretase activity cleaves the extracellular portion of APP leading to a secreted APP form, while γ -secretase activity produces β -Amyloid peptide (39-43 amino acids). The A β peptide produces abnormal plaques in the cerebral cortex and blood vessel walls during Alzheimer's disease. Nicastrin is a PS1 associated transmembrane protein, that contains N-terminal glycosylation and myristoylation sites. Nicastrin can bind full length APP and the fragments produced by γ -secretase. In *C. elegans*, suppression of nicastrin expression produces phenotypes that mimic those produced when notch signaling proteins are suppressed. In *Drosophila*, deficiencies in nicastrin prevent cleavage of the intracellular portion of Notch. Thus, nicastrin may be a functional component of presenilins and γ -secretase complexes, which process Notch and APP transmembrane receptors.



Western blot analysis of Nicastrin on WI-38 lysate. Lane 1: 1:500, lane 2: 1:1000, lane 3: 1:2000 dilution of Nicastrin.

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Store undiluted at -20°C.

Application Notes

Application

Western blot	Routinely Tested
Immunofluorescence	Not Recommended

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Suggested Companion Products

Catalog Number	Name	Size	Clone
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)
611476	WI-38 Cell Lysate	500 µg	(none)

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

Chen F, Yu G, Arawaka S, et al. Nicastrin binds to membrane-tethered Notch. *Nat Cell Biol.* 2001; 3(8):751-754. (Biology)

Yu G, Nishimura M, Arawaka S, et al. Nicastrin modulates presenilin-mediated notch/glp-1 signal transduction and betaAPP processing. *Nature.* 2000; 407(6800):48-54. (Biology)