10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Neurturin Antibody

Catalog # ASC10012

Product Information

Application	WB, E, IHC-P
Primary Accession	Q99748
Other Accession	NP_004549, 4758826
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	22405
Conjugate	Unconjugated
Application Notes	Neurturin antibody can be used for detection of neurturin by Western blot. An approximate 14 kDa band of the full length recombinant NTN was detected. Antibody can also be used for immunohistochemistry starting at 5 □g/mL.

Additional Information

Gene ID	4902
Other Names	Neurturin Antibody: NTN, Neurturin, neurturin
Target/Specificity	NRTN;
Reconstitution & Storage	Neurturin antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	Neurturin Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	NRTN {ECO:0000303|PubMed:31535977, ECO:0000312|HGNC:HGNC:8007}
Function	Growth factor that supports the survival of sympathetic neurons in culture (PubMed:8945474). May regulate the development and maintenance of the CNS (PubMed:8945474). Involved in the development of the neural crest (PubMed:15242795). Might control the size of non- neuronal cell population such as haemopoietic cells (PubMed:8945474). Acts by binding to its coreceptor, GFRA2, leading to autophosphorylation and activation of the RET receptor (PubMed:10829012, PubMed:29414779, PubMed:31535977). Heparan sulfate- binding is required for signaling (PubMed:29414779).
Cellular Location	Secreted {ECO:0000250|UniProtKB:P97463}.

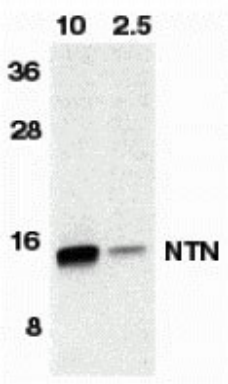
Background

Neurturin Antibody: Glial cell line-derived neurotrophic factor (GDNF) plays key roles in the control of vertebrate neuron survival and differentiation. A novel neurotrophic factor was recently cloned from human and mouse and designated neurturin. Physiological responses to neurturin (NTN) require the presence of receptor tyrosine kinase RET and a novel glycosylphosphatidylinositol linked receptor NTNRalpha. The cDNAs encoding NTNRalpha from human, rat, chicken, and mouse have been cloned recently and termed GDNFRβ, Ret ligand 2 (RETL2) or TGF-beta-related neurotrophic factor receptor 2 (TrnR2) and nominated as GFRα-2 recently. NTN binds to and forms a complex with GFRα-2 and the Ret PTK and activates the RET receptor tyrosine kinase pathway. Both NTN and GDNF can activate the MAP kinase and phosphatidylinositol 3-kinase pathways and play a critical role in the development of many neuronal populations. Neurturin and GDNF define a new family of neurotrophic factors.

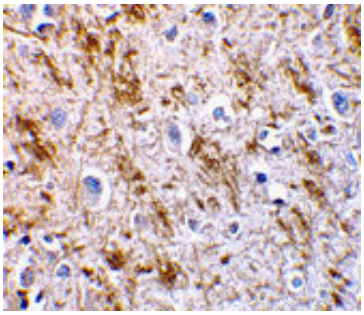
References

Kotzbauer PT, Lampe PA, Heuckeroth RO, et al. Neurturin, a relative glial-cell-line-derived neurotrophic factor. Nature 1996;384:467-470
Heuckeroth RO, Kotzbauer P, Copeland NG, et al. Neurturin, a novel neurotrophic factor, is localized to mouse chromosome 17 and human chromosome 19p13.3. Genomics 1997;44(1):137-40
Klein RD, Sherman D, Ho WH, et al. GPI-linked protein that interacts with Ret to form a candidate neurturin receptor. Nature 1997;387:717-721
Buj-Bello A, Adu J, Pinon LG, et al. Neurturin responsiveness requires a GPI-linked receptor and the Ret receptor tyrosine kinase. Nature 1997;387:721-724

Images



Western blot analysis of NTN in HeLa cell lyaste containing 10 or 2.5 ng of full length recombinant NTN with neurturin antibody at 1:500.



Immunohistochemistry of neurturin in human brain tissue with neurturin antibody at 5 µg/mL.