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Anti-CNTF Picoband Antibody

Catalog # ABO12537

Product Information

Application	WB, E
Primary Accession	P26441
Host	Rabbit
Reactivity	Human
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Ciliary neurotrophic factor(CNTF) detection. Tested with WB, ELISA in Human.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	1270
Other Names	Ciliary neurotrophic factor, CNTF, CNTF
Calculated MW	22931
Application Details	ELISA , 0.1-0.5 □g/ml, Human, - Western blot, 0.1-0.5 □g/ml, Human
Subcellular Localization	Cytoplasm.
Tissue Specificity	Nervous system.
Source	Eukaryota
Protein Name	Ciliary neurotrophic factor
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Immunogen	E. coli-derived human CNTF recombinant protein (Position: H12-M200). Human CNTF shares 84.1% and 85.2% amino acid (aa) sequence identity with mouse and rat CNTF, respectively.
Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins.
Storage	At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.

Protein Information

Name	CNTF (HGNC:2169)
Function	Functions as a cytokine through the ciliary neurotrophic factor receptor (CNTFR) complex (PubMed:10966616, PubMed:11285233, PubMed:11294841, PubMed:31932351, PubMed:36930708). The CNTFR complex indeed consists of the membrane-anchored non-signaling receptor CNTFR and the two signaling receptor subunits IL6ST/gp130 and LIFR that transduce the signal into the cell (PubMed:36930708). Functionally, promotes neuronal survival, supports differentiation of various neuronal and non-neuronal cells, and importantly regulates oligodendrocyte progenitor proliferation (PubMed:1861138, PubMed:1883844, PubMed:31932351). Mechanistically, ligand binding to the CNTFR induces dimerization of the IL6ST/gp130 and LIFR, which activates JAK tyrosine kinases (JAK1 or JAK2 and to lesser extent TYK2) bound to their intracellular domains (PubMed:11294841). These kinases subsequently phosphorylate IL6ST/gp130 and LIFR (PubMed:11294841). The tyrosine phosphorylated signaling receptors serve in turn as docking sites for recruitment and activation of signal transducer and activators of transcription (STAT3 and to lesser extent STAT1) (PubMed:11285233, PubMed:11294841). Can also signal via trans-signaling using soluble forms of CNTFR (PubMed:31932351, PubMed:7681218). Seems to prevent the degeneration of motor axons after axotomy (By similarity).
Cellular Location	Cytoplasm. Secreted {ECO:0000250|UniProtKB:Q02011}. Note=The precursor semms to be cytoplasmic (Probable). The lack of a specific hydrophobic segment in the precursor sequence suggests that CNTF is released by damaged cells or is secreted by a mechanism differing from that used for other secretory proteins (By similarity). {ECO:0000250|UniProtKB:P20294, ECO:0000305|PubMed:1915374}

Background

Ciliary neurotrophic factor (CNTF) is a potent polypeptide hormone whose actions appear to be restricted to the nervous system where it promotes survival, neurotransmitter synthesis and neurite outgrowth in certain neuronal populations. This gene is located on chromosome 11, as determined using human-hamster somatic cell hybrids. The CNTF protein is highly conserved in evolution. The amino acid (aa) sequences of rat and rabbit CNTF translated from cDNAs display approx. 85% homology with the deduced aa sequence encoding human CNTF. CNTF induces weight loss and improves glucose tolerance in humans and rodents. It is thought to act centrally by inducing hypothalamic neurogenesis to modulate food intake and peripherally by altering hepatic gene expression, in a manner similar to that of leptin.

Images



Western blot analysis of CNTF expression in MCF-7 whole cell lysates (lane 1). CNTF at 27KD was detected using rabbit anti-CNTF Antigen Affinity purified polyclonal antibody (Catalog # ABO12537) at0.5 ??g/mL. The blot was developed using chemiluminescence (ECL) method .

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