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Anti-CNTFR Reference Antibody (Regeneron patent anti-CNTFR)

Catalog # APR11441

Product Information

Application	Functional assay, Kinetics (SPR), Kinetics (BLI), FACS, E, FTA
Primary Accession	P26992
Reactivity	Human
Clonality	Monoclonal
Isotype	IgG4SP
Calculated MW	40633

Additional Information

Target/Specificity	CNTFR
Expression system	CHO

Protein Information

Name	CNTFR {ECO:0000303|PubMed:7774913, ECO:0000312|EMBL:AAA35707.1}
Function	Functions either as a membrane-anchored non-signaling receptor via a GPI anchor or, after proteolytic release, as a soluble ligand-binding chaperone, and mediates signaling of CNTF-related cytokines, including ciliary neurotrophic factor (CNTF), cardiotrophin- like cytokine factor 1 (CLCF1), and the heterodimeric cytokine formed by CLCF1 and the cytokine receptor-like factor 1 (CRLF1) (PubMed:10966616, PubMed:11285233, PubMed:11294841, PubMed:26858303, PubMed:31932351, PubMed:36930708, PubMed:7681218). Involved namely in cell survival of motor neurons and regulation of oligodendrocyte progenitor proliferation (PubMed:11285233, PubMed:19386761, PubMed:31932351). Functions within the ciliary neurotrophic factor receptor (CNTFR) complex as a membrane-anchored non-signaling receptor subunit associated with two other signaling receptor subunits IL6ST/gp130 and LIFR (PubMed:10966616, PubMed:11285233, PubMed:11294841, PubMed:26858303, PubMed:31932351, PubMed:36930708, PubMed:7681218). Also, functions within the humanin receptor complex as a membrane-anchored non-signaling receptor subunit associated with IL6ST/GP130 and IL27RA/WSX1 that mediates the MT-RNR2/humanin signaling which induces neuroprotection (PubMed:19386761). Alternatively functions as a soluble ligand-binding chaperone that binds ligand in the extracellular space, forming a cytokine complex which is delivered to the IL6ST/gp130 and LIFR signaling receptor subunits (PubMed:11285233, PubMed:31932351, PubMed:7681218). Mechanistically, ligand binding to the CNTFR induces dimerization of the IL6ST/gp130 and LIFR (or IL27RA/WSX1 in the case of MT-RNR2/humanin),

which activate JAK tyrosine kinases (JAK1 or JAK2 and to lesser extent TYK2) bound to their intracellular domains (PubMed:10966616, PubMed:11285233, PubMed:11294841, PubMed:19386761, PubMed:7681218). These kinases subsequently phosphorylate IL6ST/gp130 and LIFR (or IL27RA/WSX1) (PubMed:10966616, PubMed:11285233, PubMed:11294841, PubMed:7681218). 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:10966616, PubMed:11285233, PubMed:11294841, PubMed:19386761, PubMed:7681218).

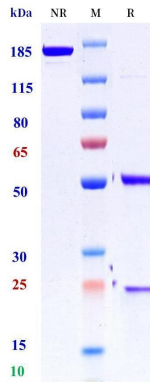
Cellular Location

Cell membrane; Lipid-anchor, GPI-anchor. Secreted. Note=Localized at cell membrane when associated with SORL1 (PubMed:26858303). Released from plasma membrane and extracellular vesicles (EV) by GDPD2 (PubMed:31932351)

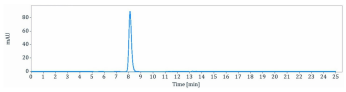
Tissue Location

Nervous system and skeletal muscle (PubMed:1648265). Soluble form is detected in cerebrospinal fluid (CSF) and is released from skeletal muscle in response to peripheral nerve injury (PubMed:7681218).

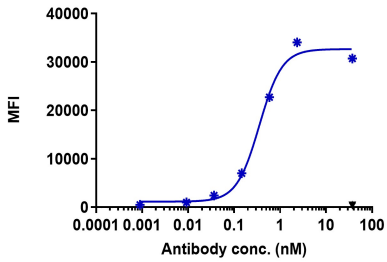
Images



Anti-CNTFR Reference Antibody (Regeneron patent anti-CNTFR) on SDS-PAGE under reducing (R) condition. The purity of the protein is greater than 95%.



The purity of Anti-CNTFR Reference Antibody (Regeneron patent anti-CNTFR) is 99.27%, determined by SEC-HPLC.



PLVX-puro-CNTFR-FL cell line were stained with Regeneron patent anti-CNTFR and negative control protein respectively, washed and then followed by PE and analyzed with FACS, with the EC50 is 0.365 nM.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.