9051 Mira Mesa Blvd, #910094
San Diego, CA 92191
Tel: 760-390-3989

CNTFR Human

Ciliary Neurotrophic Factor Receptor Human Recombinant
NTR0019

Product Overview

Name	CNTFR Human
Description	
Ciliary Neurotrophic Factor Receptor Human Recombinant	
Accession (Primary)	P26992
Synonyms	
Ciliary Neurotrophic Factor Receptor, CNTF Receptor Subunit Alpha, CNTFR-Alpha, Ciliary Neurotrophic Factor Receptor Subunit Alpha, Ciliary neurotrophic factor receptor subunit alpha, CNTF receptor subunit alpha, CNTFR-alpha.	
Introduction	
Ciliary Neurotrophic Factor Receptor, also known as CNTFR is a member of the type I cytokine receptor family. CNTFR binds to CNTF . The alpha subunit provides the receptor specificity . Sole nucleotide polymorphisms in CNTFR has been associated with variations in muscle strength, in addition to early onset of eating disorders.	
Source	
Escherichia Coli.	
Physical Appearance	
Sterile Filtered colorless clear solution.	
Formulation	
CNTFR protein solution (1mg/ml) containing 20mM Tris-HCl buffer (pH 8.0) and 10% glycerol.	
Stability	
Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.	
Purity	
Greater than 85.0% as determined by SDS-PAGE.	
Amino acid sequence	
MGSSHHHHHH SSGLVPRGSH M QRHSPQEAP HVQYERLGSD VTLPCGTANW DAAVTWRVNG TDLAPDLLNG SQLVLHGLEL GHSGLYACFH RDSWHLRHQV LLHVGLPPRE PVLSCRSNTY PKGFYCSWHL PTPTYIPNTF NVTVLHGSKI MVCEKDPALK NRCHIRYMHL FSTIKYKVSI SVSNALGHNA TAITFDEFTI VKPDPPENVV ARPVPSNPRR LEVTWQTPST WPDPESFPLK FFLRYRPLIL DQWQHVELSD GTAHTITDAY AGKEYIIQVA	

9051 Mira Mesa Blvd, #910094
San Diego, CA 92191
Tel: 760-390-3989

AKDNEIGTWS DWSVAAHATP WTEEPRHLTT EAQAAETTTS TTSSLAPPPT TKICDPGELG S.

Background

Unveiling the Potential of Human Recombinant Ciliary Neurotrophic Factor Receptor: Insights and Applications Abstract: The Ciliary Neurotrophic Factor Receptor (CNTFR) holds a crucial role in mediating the effects of ciliary neurotrophic factor (CNTF) on neuronal survival and growth. This paper discusses the significance of Human Recombinant CNTFR, its production methods, and its potential applications in neurobiology and therapeutic interventions. The review sheds light on the pivotal role of CNTFR in neuroprotection and neuroregeneration research. Introduction: CNTFR, a transmembrane protein, plays a pivotal role in transmitting CNTF-mediated signals to the cell. The availability of Human Recombinant CNTFR allows researchers to investigate its role in neuronal function and develop targeted therapies for neurodegenerative disorders. CNTFR's involvement in modulating neuronal health and promoting regeneration makes it an essential component in neurobiology. Role in CNTF Signaling: CNTFR forms a receptor complex with other proteins, including gp130 and LIFRβ, to bind CNTF and initiate downstream signaling pathways. Activation of intracellular signaling cascades, such as JAK/STAT and MAPK, contributes to the neuroprotective and growth-promoting effects of CNTF. Production Methods: Human Recombinant CNTFR is produced through gene expression in suitable host cells, often employing bacterial or mammalian systems. Ensuring proper folding and post-translational modifications is essential to maintain its functionality and binding affinity for CNTF. Therapeutic Applications: The availability of Human Recombinant CNTFR offers potential therapeutic applications in neurodegenerative diseases like amyotrophic lateral sclerosis (ALS), multiple sclerosis, and retinal degeneration. Manipulating CNTFR-mediated signaling presents opportunities to enhance neuronal survival and regeneration, ultimately improving patient outcomes. Challenges and Future Directions: While promising, challenges include optimizing the interaction between CNTFR and CNTF, ensuring efficient delivery to target tissues, and understanding potential off-target effects. Ongoing research is essential to unravel the complete mechanisms of CNTFR-mediated signaling and its implications for therapy. Conclusion: Human Recombinant Ciliary Neurotrophic Factor Receptor serves as a crucial tool in advancing our understanding of neuroprotection and regeneration. Its potential to modulate CNTF-mediated effects opens avenues for innovative therapeutic strategies targeting neurodegenerative disorders, exemplifying the intersection of molecular biology and clinical application.

References

Bibliography: Ip NY, Yancopoulos GD. The neurotrophins and CNTF: Two families of collaborative neurotrophic factors. Annu Rev Neurosci. 1996;19:491-515. Sendtner M. The biology of neurotrophic factors. J Neurobiol. 1994;25(11):1384-1403. Davis S, Aldrich TH, Valenzuela DM, et al. The receptor for ciliary neurotrophic factor. Science. 1991;253(5015):59-63. Benveniste EN, Benveniste P, Shaffer K. Ciliary neurotrophic factor promotes the glial differentiation of rat cortical precursor cells. J Neurosci Res. 1993;36(6):607-614. DeChiara TM, Vejsada R, Poueymirou WT, et al. Mice lacking the CNTF receptor, unlike mice lacking CNTF, exhibit profound motor neuron deficits at birth. Cell. 1995;83(2):313-322.

Precautions

CNTFR Human is for research use only and not for use in diagnostic or therapeutic procedures.

9051 Mira Mesa Blvd, #910094
San Diego, CA 92191
Tel: 760-390-3989

Target Information: (P26992)

Background

Unveiling the Potential of Human Recombinant Ciliary Neurotrophic Factor Receptor: Insights and Applications Abstract: The Ciliary Neurotrophic Factor Receptor (CNTFR) holds a crucial role in mediating the effects of ciliary neurotrophic factor (CNTF) on neuronal survival and growth. This paper discusses the significance of Human Recombinant CNTFR, its production methods, and its potential applications in neurobiology and therapeutic interventions. The review sheds light on the pivotal role of CNTFR in neuroprotection and neuroregeneration research. Introduction: CNTFR, a transmembrane protein, plays a pivotal role in transmitting CNTF-mediated signals to the cell. The availability of Human Recombinant CNTFR allows researchers to investigate its role in neuronal function and develop targeted therapies for neurodegenerative disorders. CNTFR's involvement in modulating neuronal health and promoting regeneration makes it an essential component in neurobiology. Role in CNTF Signaling: CNTFR forms a receptor complex with other proteins, including gp130 and LIFRβ, to bind CNTF and initiate downstream signaling pathways. Activation of intracellular signaling cascades, such as JAK/STAT and MAPK, contributes to the neuroprotective and growth-promoting effects of CNTF. Production Methods: Human Recombinant CNTFR is produced through gene expression in suitable host cells, often employing bacterial or mammalian systems. Ensuring proper folding and post-translational modifications is essential to maintain its functionality and binding affinity for CNTF. Therapeutic Applications: The availability of Human Recombinant CNTFR offers potential therapeutic applications in neurodegenerative diseases like amyotrophic lateral sclerosis (ALS), multiple sclerosis, and retinal degeneration. Manipulating CNTFR-mediated signaling presents opportunities to enhance neuronal survival and regeneration, ultimately improving patient outcomes. Challenges and Future Directions: While promising, challenges include optimizing the interaction between CNTFR and CNTF, ensuring efficient delivery to target tissues, and understanding potential off-target effects. Ongoing research is essential to unravel the complete mechanisms of CNTFR-mediated signaling and its implications for therapy. Conclusion: Human Recombinant Ciliary Neurotrophic Factor Receptor serves as a crucial tool in advancing our understanding of neuroprotection and regeneration. Its potential to modulate CNTF-mediated effects opens avenues for innovative therapeutic strategies targeting neurodegenerative disorders, exemplifying the intersection of molecular biology and clinical application.

References for protein:

Bibliography: Ip NY, Yancopoulos GD. The neurotrophins and CNTF: Two families of collaborative neurotrophic

factors. Annu Rev Neurosci. 1996;19:491-515. Sendtner M. The biology of neurotrophic factors. J Neurobiol. 1994;25(11):1384-1403. Davis S, Aldrich TH, Valenzuela DM, et al. The receptor for ciliary neurotrophic factor. Science. 1991;253(5015):59-63. Benveniste EN, Benveniste P, Shaffer K. Ciliary neurotrophic factor promotes the glial differentiation of rat cortical precursor cells. J Neurosci Res. 1993;36(6):607-614. DeChiara TM, Vejsada R, Poueymirou WT, et al. Mice lacking the CNTF receptor, unlike mice lacking CNTF, exhibit profound motor neuron deficits at birth. Cell. 1995;83(2):313-322.