

DESCRIPTION

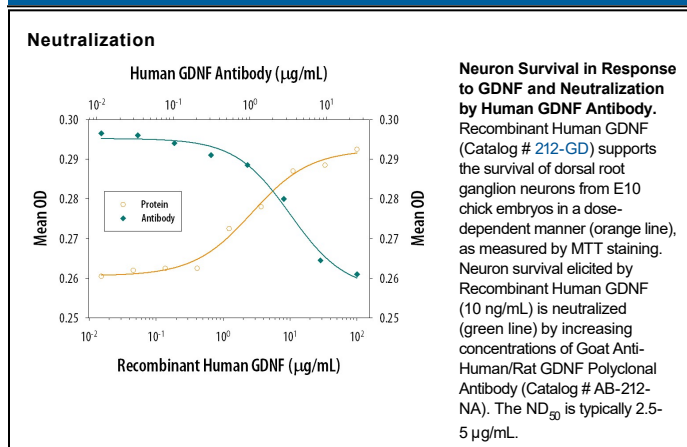
Species Reactivity	Human/Rat
Specificity	Detects human and rat GDNF in direct ELISAs and Western blots.
Source	Polyclonal Goat IgG
Purification	Protein A or G purified
Immunogen	<i>E. coli</i> -derived recombinant human GDNF Arg109-Ile211 Accession # P39905
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	1 µg/mL	Recombinant Human GDNF (Catalog # 212-GD) Recombinant Rat GDNF (Catalog # 512-GF)
Neutralization		Measured by its ability to neutralize the effect of GDNF on dorsal root ganglion neurons from E10 chick embryos. Davies, A. M. (1989) in <i>Neurotrophic Factor Bioassay Using Dissociated Neurons</i> , Nerve Growth Factor. Rush, R. A. (eds): John Willey and Sons, Ltd. 95. The Neutralization Dose (ND ₅₀) is typically 2.5-5 µg/mL in the presence of 10 ng/mL Recombinant Human GDNF.

DATA



PREPARATION AND STORAGE

Reconstitution	Reconstitute at 1 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Glial Cell Line-derived Neurotrophic Factor (GDNF) is a neurotrophic factor that has been shown to promote the survival of various neuronal subpopulations in both the central as well as the peripheral nervous systems at different stages of their development. Neuronal subpopulations that have been shown to be affected by GDNF include motoneurons, midbrain dopaminergic neurons, Purkinje cells and sympathetic neurons.

Native GDNF, a disulfide-linked homodimeric glycoprotein, is a novel member of the TGF-β superfamily. Human GDNF cDNA encodes a 211 amino acid residue prepropeptide that is processed to yield a dimeric protein. Mature human GDNF was predicted to contain two 134 amino acid residue subunits. NS0 expressed mature human GDNF lacks 31 residues from the amino-terminus of the predicted sequence. This glycosylated recombinant mature human GDNF still contains the seven conserved Cys residues found in all members of the TGF-β superfamily and is biologically active. The GDNF sequence contains two potential glycosylation sites and insect cell-expressed recombinant rat GDNF proteins are glycosylated. Mature rat and human GDNF exhibit approximately 93% amino acid sequence identity and show considerable species cross-reactivity. Cells known to express GDNF include Sertoli cells, type 1 astrocytes, Schwann cells, neurons, pinealocytes and skeletal muscle cells.