

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse CDNF in Western blots. In Western blots, approximately 30% cross-reactivity with recombinant human CDNF is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse CDNF Leu27-Leu187 Accession # Q8CC36
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with BSA as a carrier protein. 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	0.1 µg/mL	Recombinant Mouse CDNF (Catalog # 5187-CD)

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 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	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <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

CDNF (conserved dopamine neurotrophic factor), also called Armet1 (arginine-rich, mutated in early stage tumors-like 1), is a 17-19 kDa secreted protein that shares 52% amino acid (aa) identity with mouse MANF (mesencephalic-astrocyte-derived neurotrophic factor), also called Armet (1). The Armet designation is not preferred, because the proteins as translated are not actually arginine-rich (1). However, both CDNF and MANF have a high proportion of charged residues, a pattern of eight cysteines shown to form intramolecular disulfide bonds, and a C-terminal endoplasmic reticulum retention signal (shown to function in MANF) (1-3). The mouse CDNF cDNA encodes a 187 aa protein with a 24 aa signal sequence and a 163 mature sequence (1). Mature mouse CDNF shares 80%, 87%, 83%, and 82% aa identity with human, rat, equine and bovine CDNF, respectively. Although CDNF mRNA and protein are expressed in pre and postnatal mouse brain, they are mostly abundant in adult heart, skeletal muscle and testis. Transcripts within the postnatal mouse brain are concentrated in the hippocampus, thalamus, corpus callosum and optic nerve (1). Like MANF and GDNF, CDNF promotes survival of dopaminergic neurons *in vitro* (1, 4). In a rat Parkinson's disease model, CDNF also promotes rescue and restoration of dopaminergic neurons *in vivo* (1).

References:

1. Lindholm, P. *et al.* (2007) *Nature* **448**:73.
2. Mizobuchi, N. *et al.* (2007) *Cell Struct. Funct.* **32**:41.
3. Raykhel, I. *et al.* (2007) *J. Cell Biol.* **179**:1193.
4. Petrova, P. *et al.* (2003) *J. Mol. Neurosci.* **20**:173.