

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human CDNF in direct ELISAs and Western blots. In direct ELISAs and Western blots, approximately 10% cross-reactivity with recombinant mouse CDNF is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human CDNF Gln25-Leu187 Accession # Q49AH0
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

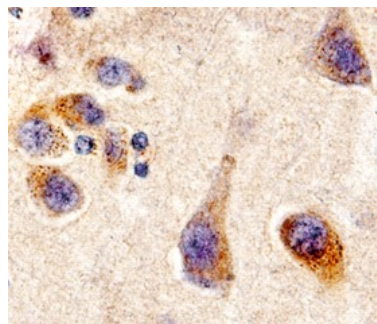
APPLICATIONS

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 Human CDNF (Catalog # 5097-CD)
Immunohistochemistry	5-15 µg/mL	See Below

DATA

Immunohistochemistry



CDNF in Human Brain. CDNF was detected in immersion fixed paraffin-embedded sections of human brain (cortex) using 10 µg/mL Goat Anti-Human CDNF Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5097) overnight at 4 °C. Before incubation with the primary antibody tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained with the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

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. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
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

CDNF (conserved dopamine neurotrophic factor), also called Armet1 (arginine-rich, mutated in early stage tumors-like 1) in mouse, is a 17-19 kDa secreted protein that shares 62% amino acid (aa) identity with human MANF (mesencephalic-astrocyte-derived neurotrophic factor), also called Armet in mouse (1). The Armet designation is not preferred, because the proteins when 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 disulfides, and a C-terminal endoplasmic reticulum retention signal (shown to function in MANF) (1-3). The human CDNF cDNA encodes a 187 aa protein with a 24 aa signal sequence and a 163 mature sequence (1). Mature human CDNF shares 80%, 84%, 90%, and 92% aa identity with mouse, rat, equine, and bovine CDNF, respectively. Although CDNF mRNA and protein are expressed in pre- and post-natal mouse brain, they are most 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.