Mouse CDNF Antibody

Monoclonal Rat IgG_{2A} Clone # 560108

Catalog Number: MAB5187

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse CDNF in direct ELISAs. In direct ELISAs, less than 5% cross-reactivity with recombinant human CDNF is observed.
Source	Monoclonal Rat IgG_{2A} Clone # 560108
Purification	Protein A or G purified from hybridoma culture supernatant
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 Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μm filtered solution in PBS.

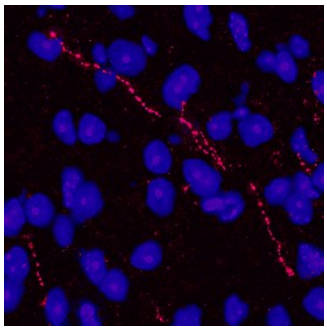
APPLICATIONS

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
Immunohistochemistry	8-25 µg/mL	See Below

DATA

Immunohistochemistry



CDNF in Mouse Brain. CDNF was detected in perfusion fixed frozen sections of mouse brain using Rat Anti-Mouse CDNF Monoclonal Antibody (Catalog # MAB5187) at 25 µg/mL overnight at 4 °C. Tissue was stained using the NorthernLights™ 557-conjugated Anti-Rat IgG Secondary Antibody (red; Catalog # NL013) and counterstained with DAPI (blue). Specific staining was localized to neuronal processes. View our protocol for Fluorescent IHC Staining of Frozen Tissue Sections.

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
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.** ● 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 Armetl1 (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 intramoleculular 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.