

Anti-GDNF Antibody
Catalog # ABO10784**Specification**

Anti-GDNF Antibody - Product Information

Application	WB, IHC-P, ICC
Primary Accession	P39905
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

Description

Rabbit IgG polyclonal antibody for Glial cell line-derived neurotrophic factor(GDNF) detection. Tested with WB, IHC-P, ICC in Human;Mouse;Rat.

Reconstitution

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-GDNF Antibody - Additional Information

Gene ID 2668

Other Names

Glial cell line-derived neurotrophic factor, hGDNF, Astrocyte-derived trophic factor, ATF, GDNF

Calculated MW

23720 MW KDa

Application Details

Immunocytochemistry , 0.5-1 µg/ml, Human, -
Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Rat, Mouse, By Heat
Western blot, 0.1-0.5 µg/ml, Human

Subcellular Localization

Secreted .

Tissue Specificity

In the brain, predominantly expressed in the striatum with highest levels in the caudate and lowest in the putamen. Isoform 2 is absent from most tissues except for low levels in intestine and kidney. Highest expression of isoform 3 is found in pancreatic islets. Isoform 5 is expressed at very low levels in putamen, nucleus accumbens, prefrontal cortex, amygdala, hypothalamus and intestine. Isoform 3 is up-regulated in the middle temporal gyrus of Alzheimer disease patients while isoform 2 shows no change. .

Protein Name

Glial cell line-derived neurotrophic factor(hGDNF)

Contents

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na₂HPO₄, 0.05mg Thimerosal, 0.05mg NaN₃.

Immunogen

A synthetic peptide corresponding to a sequence in the middle region of human GDNF(142-158aa FRYCSGSCDAAETTYDK), different from the related mouse sequence by three amino acids and rat sequence by two amino acids.

Purification

Immunogen affinity purified.

Cross Reactivity

No cross reactivity with other proteins

Storage

At -20°C for one year. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for a longer time. Avoid repeated freezing and thawing.

Sequence Similarities

Belongs to the TGF-beta family. GDNF subfamily.

Anti-GDNF Antibody - Protein Information**Name** GDNF**Function**

Neurotrophic factor that enhances survival and morphological differentiation of dopaminergic neurons and increases their high-affinity dopamine uptake (PubMed: [8493557](http://www.uniprot.org/citations/8493557)). Acts by binding to its coreceptor, GFRA1, leading to autophosphorylation and activation of the RET receptor (PubMed: [10829012](http://www.uniprot.org/citations/10829012)), PubMed: [25242331](http://www.uniprot.org/citations/25242331), PubMed: [31535977](http://www.uniprot.org/citations/31535977)). Involved in the development of the neural crest (PubMed: [15242795](http://www.uniprot.org/citations/15242795)).

Cellular Location

Secreted

Tissue Location

In the brain, predominantly expressed in the striatum with highest levels in the caudate and lowest in the putamen. Isoform 2 is absent from most tissues except for low levels in intestine and kidney. Highest expression of isoform 3 is found in pancreatic islets. Isoform 5 is expressed at very low levels in putamen, nucleus accumbens, prefrontal cortex, amygdala, hypothalamus and intestine. Isoform 3 is up-regulated in the middle temporal gyrus of Alzheimer disease patients while isoform 2 shows no change.

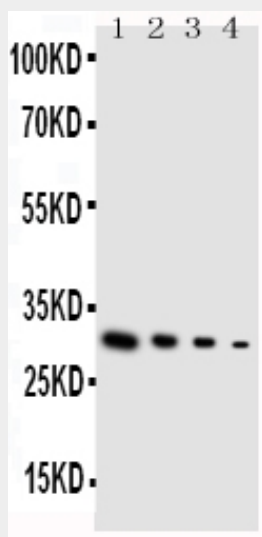
Anti-GDNF Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

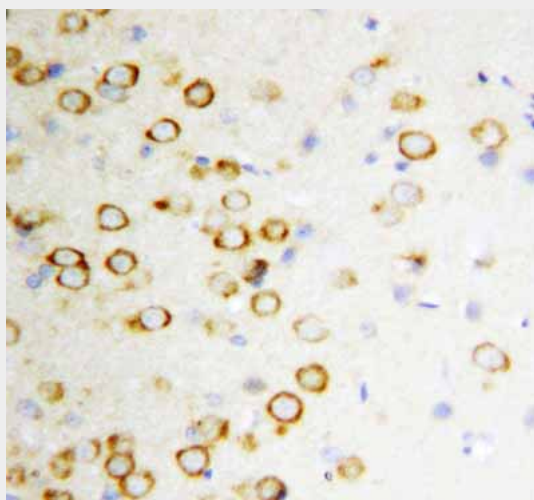
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)

- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

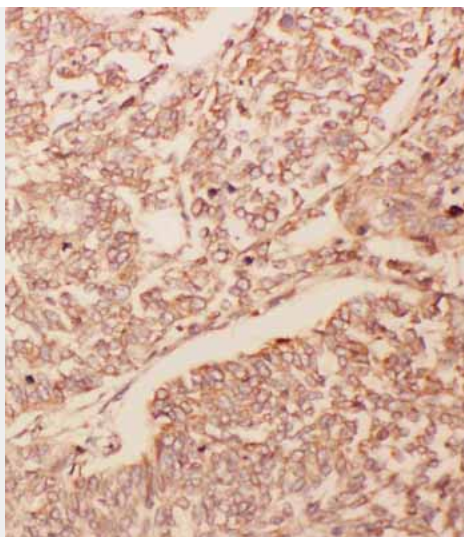
Anti-GDNF Antibody - Images



Anti-GDNF antibody, ABO10784, Western blotting
Lane 1: Recombinant Human GDNF Protein 10ng
Lane 2: Recombinant Human GDNF Protein 5ng
Lane 3: Recombinant Human GDNF Protein 2.5ng
Lane 4: SMMC Cell Lysate



Anti-GDNF antibody, ABO10784, IHC(P)
IHC(P): Rat Brain Tissue



Anti-GDNF antibody, ABO10784, IHC(P)IHC(P): Human Lung Cancer Tissue

Anti-GDNF Antibody - Background

GDNF, Glial cell-derived neurotrophic factor, is a protein that, in humans, is encoded by the GDNF gene. GDNF is a small protein that potently promotes the survival of many types of neurons. GDNF is a founding member of the GDNF family of ligands(GFL). The GDNF gene is mapped to human chromosome 5p13.1-p12 by fluorescence in situ hybridization(FISH). This gene encodes a highly conserved neurotrophic factor. The recombinant form of this protein was shown to promote the survival and differentiation of dopaminergic neurons in culture, and was able to prevent apoptosis of motor neurons induced by axotomy. The encoded protein is processed to a mature secreted form that exists as a homodimer. The mature form of the protein is a ligand for the product of the RET(rearranged during transfection) protooncogene.