

Rabbit GDNF Polyclonal Antibody | anti-GDNF antibody

GDNF Antibody: ATTO 488

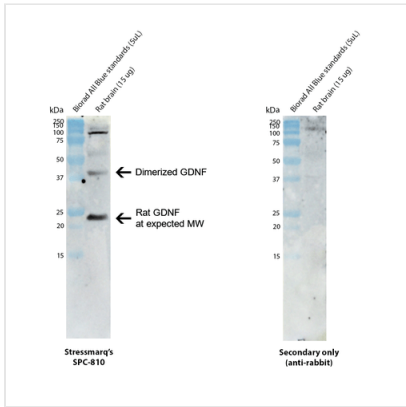
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA254104	Rabbit	Human, Mouse, Rat	Western Blot

PRODUCT SYNONYMS

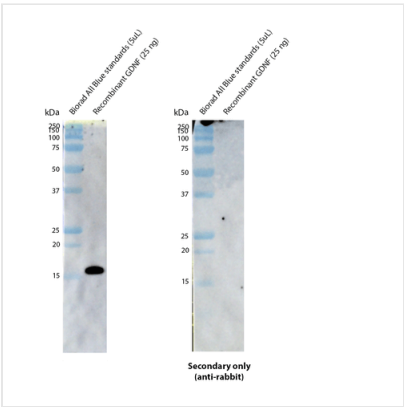
GDNF; Polyclonal Antibody; GDNF Antibody: ATTO 488; Glial cell line-derived neurotrophic factor Antibody; Astrocyte-derived trophic factor Antibody; Astrocyte derived trophic factor 1 Antibody; Glial cell derived neurotrophic factor Antibody; ATF 1 Antibody; ATF 2 Antibody; Glial Cell Line Derived Neurotrophic Factor Antibody; ATF Antibody; Atf Antibody; HSCR3 Antibody; Astrocyte derived trophic factor Antibody; ATF2 Antibody; GDNF_HUMAN Antibody; GDNF Antibody; Glial derived neurotrophic factor Antibody; ATF1 Antibody; gdnf Antibody; HFB1 GDNF Antibody; hGDNF Antibody; anti-GDNF antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Specificity	Detects monomeric and homodimeric GDNF 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.
Purity/Purification	Protein A Purified
Form/Format	PBS pH 7.4, 50% glycerol, 0.09% sodium azide *Storage buffer may change when conjugated
Concentration	1mg/mL (varies by lot)
Applicable Applications for anti-GDNF antibody	WB (Western Blot)
Immunogen Species	Human
Immunogen	Recombinant Human GDNF Protein, Full length (AA78-211)
Conjugation	ATTO 488
Certificate of Analysis	1ug/mL of SPC-810 was sufficient for detection of GDNF in 15ug of rat brain tissue lysate by colorimetric immunoblot analysis using goat anti-rabbit IgG:HRP as the secondary antibody.
Preparation and Storage	Conjugated antibodies should be stored according to the product label



WB (Western Blot)
Western blot analysis with AAA Biotech's anti-GDNF polyclonal antibody showing detection of GDNF protein in rat brain lysate (prepared in-house). Rat GDNF protein with signal and pro-peptide segments has a predicted molecular weight of 23.6 kDa (UniProt Q07731). Block: 5% skim milk. Primary Antibody: Rabbit Anti-GDNF Polyclonal Antibody at 1:1000 for 2 hours at RT. Secondary Antibody: Goat anti-rabbit IgG:HRP at 1:5000 for 1 hour at RT. Color Development: Chemiluminescent for HRP (Moss) for 3 min in RT. Exposed 7.299 seconds. NOTE secondary antibody shows some non-specific binding in the control, but not to the GDNF protein.



WB (Western Blot)
Western blot analysis with AAA Biotech's anti-GDNF polyclonal antibody showing detection of human recombinant GDNF protein. This recombinant protein has a predicted molecular weight of 15.2 kDa. Block: 5% skim milk. Primary Antibody: Rabbit Anti-GDNF Polyclonal Antibody at 1:5000 for 2 hours at RT. Secondary Antibody: Goat anti-rabbit IgG:HRP at 1:5000 for 1 hour at RT. Color Development: Chemiluminescent for HRP (Moss) for 3 min in RT. Exposed 9.122 seconds.

ADDITIONAL INFORMATION

Related Product Information for anti-GDNF antibody	Rabbit Anti-Human GDNF Polyclonal Glial cell line-derived neurotrophic factor (GDNF), a highly conserved multifunctional secretory protein, is distributed throughout the peripheral and central nervous system to support neuronal growth, proliferation, and survival (1-3). It was the first member of the GDNF family ligands (GFL). Pro-GDNF, a 211 residue precursor sequence, folds via disulphide bonding and dimerization in the endoplasmic reticulum (ER). N-linked glycosylation subsequently takes place at the tip of one of the protein's two finger-like structures. These structures facilitate contact between the mature protein, the GRFalpha1 receptor, and RET, that is necessary for GDNF signalling. A similar configuration is observed in the cytokine TGFbeta2 (2). The mature GDNF protein (134 residues) is produced by proteolysis of processed pro-GDNF at a proteolytic consensus sequence situated within the C-terminus (1). Through interactions between Cys131, Cys133, Cys68 & Cys72, the C-terminus forms a ring-like structure (3). As multiple proteases can cleave the precursor sequence, different forms of mature GDNF are possible (1). GDNF is implicated in the promotion of dopamine uptake within midbrain dopaminergic neurons, as well as the proliferation and migration of gliomas. Motor neurons, Schwann cells, oligodendrocytes, astrocytes, and skeletal muscle have been shown to secrete GDNF during neuronal development and growth (1,3). Initial studies suggested that GDNF may play a neuroprotective role in neurodegenerative disease such as amyotrophic lateral sclerosis (ALS), Parkinson's disease and various synucleinopathies (4,5), however, recent research has indicated inconsistent levels of neuroprotective ability in neurodegenerative disease models (1, 6-8).
Product Categories/Family for anti-GDNF antibody	Antibodies; Neuroscience; Neurodegeneration; Parkinson's Disease; ALS Disease; Alzheimer's Disease
References	1. Cintrón-Colón A.F., et al. 2020. Cell Tissue Res. 382(1): 47-56. 2. Airaksinen M.S. et al. 2006. Brain Behav Evol. 68(3): 181-90. 3. Oh-hashii K. et al. 2009. Mol Cell Biochem. 323(1-2): 1-7.4. Kearns C.M. & Gash D.M. 1995. Brain Res. 672(1-2): 101-111.5. Nutt J.G. et al. 2003. Neurology. 60(1): 69-73.6. Decressac M. et al. 2011. Brain. 13(8): 2302-2311.7. Barker R.A. et al. 2020. J Parkinsons Dis. 10(3): 875-891.8. Penttinen A.M. et al. 2018. Front Neurol. 9: 457.

NCBI AND UNIPROT INFORMATION

NCBI GeneID	2668
NCBI Accession #	NP_000505.1
NCBI GenBank Nucleotide #	NM_000514.3

UniProt Accession #	P39905; O95448; O95449; O95986; Q6FH33; Q96L44; Q9UD32; Q9UD33; Q9UMV2; Q9UP67; Q9UP97; B7WPK7; AAB33493; AAB33494
Molecular Weight	18,123 Da
NCBI Official Full Name	glial cell line-derived neurotrophic factor isoform 1 preproprotein
NCBI Official Synonym Full Names	glial cell derived neurotrophic factor
NCBI Official Symbol	GDNF
NCBI Official Synonym Symbols	ATF1; ATF2; HSCR3; HFB1-GDNF
NCBI Protein Information	glial cell line-derived neurotrophic factor; ATF; astrocyte-derived trophic factor
UniProt Protein Name	Glial cell line-derived neurotrophic factor
UniProt Gene Name	GDNF
UniProt Synonym Gene Names	hGDNF; ATF
UniProt Entry Name	GDNF_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://www.aaabiotech.com/polyclonal/gdnf-antibody-western-blot-elisa/254104>