

**GDNF Receptor alpha 2 Polyclonal Antibody**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP54180**

### Specification

#### **GDNF Receptor alpha 2 Polyclonal Antibody - Product Information**

Application	WB, IHC-P, IHC-F, IF, E
Primary Accession	<a href="#">O00451</a>
Reactivity	Rat, Dog, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	47 KDa
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human GDNF Receptor alpha 2 301-360/464
Epitope Specificity	IgG
Isotype	
<b>Purity</b>	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Cell membrane; Lipid-anchor, GPI-anchor.
SIMILARITY	Belongs to the GDNFR family.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

### Background Descriptions

Glial cell line-derived neurotrophic factor (GDNF) and neurturin (NTN) are two structurally related, potent neurotrophic factors that play key roles in the control of neuron survival and differentiation. The protein encoded by this gene is a member of the GDNF receptor family. It is a glycosylphosphatidylinositol(GPI)-linked cell surface receptor for both GDNF and NTN, and mediates activation of the RET tyrosine kinase receptor. This encoded protein acts preferentially as a receptor for NTN compared to its other family member, GDNF family receptor alpha 1. This gene is a candidate gene for RET-associated diseases. Multiple transcript variants encoding different isoforms have been found for this gene. Members of the glial cell line-derived neurotrophic factor(GDNF) family, including GDNF and neurturin (NTN),play key roles in the control of vertebrate neuron survival and differentiation. Physiological responses to NTN require the presence of a novel glycosylphosphatidylinositol-linked protein NTN $\alpha$ , which is a cell surface receptor for NTN. The cDNAs encoding NTN $\alpha$  from human, rat, chicken, and mouse have been cloned recently. NTN $\alpha$  was also termed GDNFR $\beta$ , Ret ligand 2 (RETL2) or TGF- $\beta$ -related neurotrophic factor receptor 2 (TrnR2) and nominated as GFR $\alpha$ -2 recently. GFR $\alpha$ -2 binds NTN and mediates activation of RET receptor tyrosine kinase by both NTN and GDNF. Thus, NTN, GFR $\alpha$ -2, and the Ret PTK form a complex to transduce NTN signal and to mediate NTN function.

#### **GDNF Receptor alpha 2 Polyclonal Antibody - Additional Information**

Gene ID 2675

**Other Names**

GDNF family receptor alpha-2, GDNF receptor alpha-2, GDNFR-alpha-2, GFR-alpha-2, GDNF receptor beta, GDNFR-beta, Neurturin receptor alpha, NRTNR-alpha, NTNR-alpha, RET ligand 2, TGF-beta-related neurotrophic factor receptor 2, GFRA2, GDNFRB, RETL2, TRNR2

**Target/Specificity**

Isoform 1 is found in both brain and placenta.

**Dilution**

<span class ="dilution\_WB">WB~~1:1000</span><br \><span class ="dilution\_IHC-P">IHC-P~~N/A</span><br \><span class ="dilution\_IHC-F">IHC-F~~N/A</span><br \><span class ="dilution\_IF">IF~~1:50~200</span><br \><span class ="dilution\_E">E~~N/A</span>

**Storage**

Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

**GDNF Receptor alpha 2 Polyclonal Antibody - Protein Information**

**Name** GFRA2

**Synonyms** GDNFRB, RETL2, TRNR2 {ECO:0000303|PubMed}

**Function**

Receptor for neurturin (NRTN), a growth factor that supports the survival of sympathetic neurons (PubMed:<a href="http://www.uniprot.org/citations/10829012" target="\_blank">10829012</a>, PubMed:<a href="http://www.uniprot.org/citations/29414779" target="\_blank">29414779</a>, PubMed:<a href="http://www.uniprot.org/citations/31535977" target="\_blank">31535977</a>, PubMed:<a href="http://www.uniprot.org/citations/9182803" target="\_blank">9182803</a>). NRTN-binding leads to autophosphorylation and activation of the RET receptor (PubMed:<a href="http://www.uniprot.org/citations/31535977" target="\_blank">31535977</a>). Also able to mediate GDNF signaling through the RET tyrosine kinase receptor (PubMed:<a href="http://www.uniprot.org/citations/9182803" target="\_blank">9182803</a>).

**Cellular Location**

Cell membrane {ECO:0000250|UniProtKB:O08842}; Lipid-anchor, GPI-anchor {ECO:0000250|UniProtKB:O08842}

**Tissue Location**

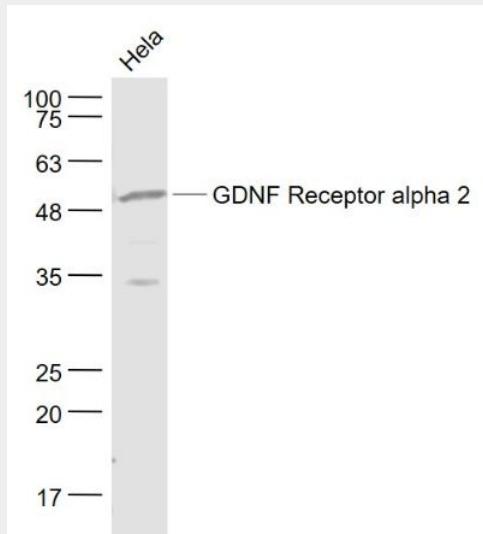
[Isoform 1]: found in both brain and placenta.

**GDNF Receptor alpha 2 Polyclonal 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](#)

**GDNF Receptor alpha 2 Polyclonal Antibody - Images****Sample:**

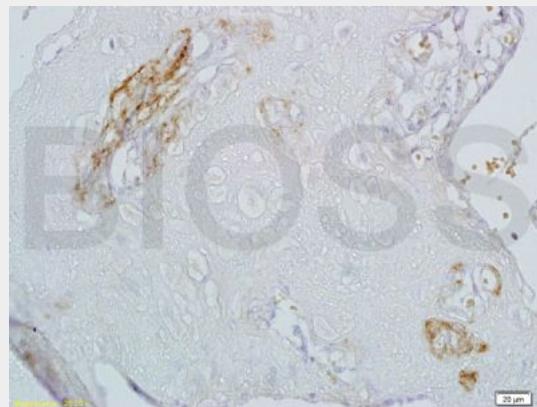
HeLa(Human) Cell Lysate at 30 ug

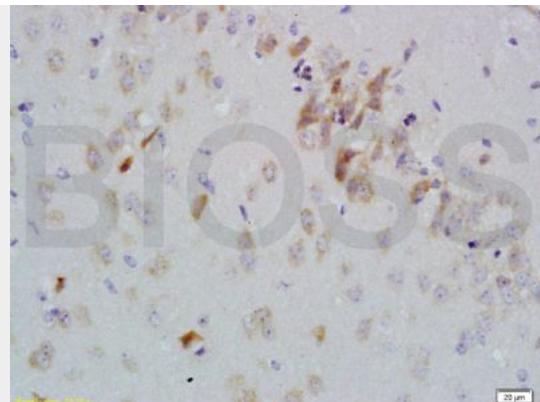
Primary: Anti- GDNF Receptor alpha 2 (bs-0054R) at 1/1000 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 47 kD

Observed band size: 52 kD





Tissue/cell: rat brain tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;

Antigen retrieval: citrate buffer ( 0.01M, pH 6.0 ), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min;

Incubation: Anti-GDNF-Receptor-alpha-2 Polyclonal Antibody, Unconjugated(bs-0054R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining