

Anti-GDNF Receptor alpha 1/GFRA1 Antibody Picoband®

Catalog Number: PB9202

About GFRA1

GDNF family receptor alpha-1 (GFRalpha1), also known as the GDNF receptor or GFRA1, is a protein that in humans is encoded by the GFRA1 gene. It is mapped to chromosome 10q25.3. The protein encoded by this gene is a member of the GDNF receptor family. GFRA1 is released by neuronal cells, Schwann cells, and injured sciatic nerve. It is a glycosylphosphatidylinositol (GPI)-linked cell surface receptor for both GDNF and NTN, and mediates activation of the RET tyrosine kinase receptor. This gene is also a candidate gene for Hirschsprung disease. Soluble GFRA1 mediates robust recruitment of RET to lipid rafts via a mechanism requiring the RET tyrosine kinase.

Overview

Product Name	Anti-GDNF Receptor alpha 1/GFRA1 Antibody Picoband®
Reactive Species	Human
Description	Boster Bio Anti-GDNF Receptor alpha 1/GFRA1 Antibody Picoband® catalog # PB9202. Tested in IHC, WB applications. This antibody reacts with Human. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains antibody formulated with stabilizing components, 0.9 mg NaCl, 0.2 mg Na ₂ HPO ₄ , and 0.05 mg NaN ₃ . *This antibody is supplied in a stabilized formulation. Compatibility with conjugation reactions depends on the chemistry of the conjugation method used. For conjugation methods that are not compatible with the stabilizing components present in this formulation, a carrier-free antibody format is required.
Storage Instructions	Store at -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P56159

Technical Details

Immunogen	E.coli-derived human GFRA1 recombinant protein (Position: D25-Q227). Human GFRA1 shares 97% amino acid (aa) sequence identity with both mouse and rat GFRA1.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P).

Cross Reactivity	No cross-reactivity with other proteins
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human Western blot, 0.1-0.5ug/ml, Human

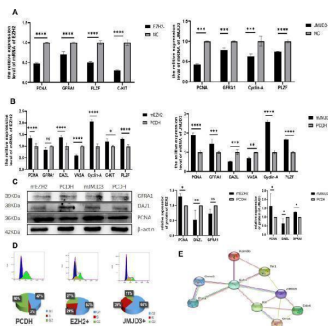
Anti-GDNF Receptor alpha 1/GFRA1 Antibody Picoband® (PB9202) Images



Western blot analysis of GFRA1 using anti-GFRA1 antibody (PB9202). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. Lane 1: recombinant human GFRA1 protein 0.5 ng. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-GFRA1 antigen affinity purified polyclonal antibody (Catalog # PB9202) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for GFRA1 at approximately 39 kDa. The expected band size for GFRA1 is at 39 kDa.

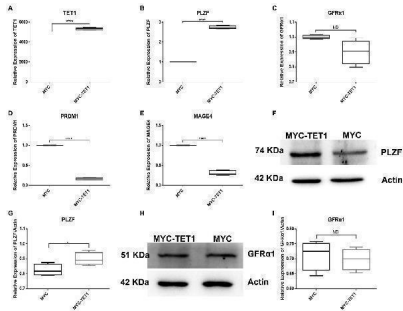


Western blot analysis of GFRA1 using anti-GFRA1 antibody (PB9202). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human placenta tissue lysates, After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-GFRA1 antigen affinity purified polyclonal antibody (Catalog # PB9202) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for GFRA1 at approximately 51 kDa. The expected band size for GFRA1 is at 51 kDa.

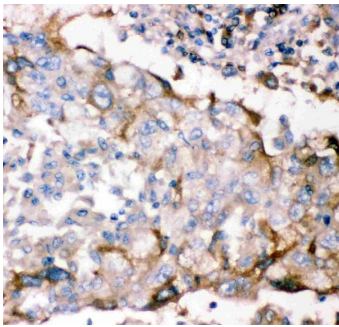


Effects of EZH2 interference or overexpression and JMJD3 interference or overexpression on self-renewal, proliferation and differentiation of spermatogonia. (A) The mRNA levels of PCNA, Cyclin-A, GFRA1, PLZF and C-KIT related to spermatogonia self-renewal and proliferation were changed after EZH2 and JMJD3 knockdown. (B) The expression of PCNA, cyclin-A, GFRA1, PLZF, C-KIT, DAZL and VASA was detected by qRT-PCR after EZH2 and JMJD3 overexpression. (C) The protein expression changes as well as statistical analysis of PCNA, DAZL and GFRA1 after EZH2 and JMJD3 overexpression. The membrane is lysed prior to hybridization with the antibody and the image has been cropped for a more aesthetically pleasing display. The full-length blots can be obtained from Additional file 2: Fig . (D) The cell cycle of EZH2 and JMJD3 overexpression cells was

detected by flow cytometry. (E) Protein interaction network of EZH2, JMJD3 and spermatogonia self-renewal, proliferation and differentiation-related genes Index in PubMed under a CC BY license. PMID: 38424516



Relative expression of specific genes in spermatogonial cells. (A) The mRNA expression of TET1 in spermatogonial cells was detected by QRT-PCR. (B) The mRNA expression of PLZF in spermatogonial cells was detected by QRT-PCR. (C) The mRNA expression of GFRalpha1 in spermatogonial cells was detected by QRT-PCR. (D) The mRNA expression of PRDM1 in spermatogonial cells was detected by QRT-PCR. (E) The mRNA expression of MAGE4 in spermatogonial cells was detected by QRT-PCR. (F) The expression of PLZF in TET1 overexpressed cells was detected by Western Blot. (G) Quantification of PLZF protein levels in TET1 overexpressed cells. (H) The expression of GFRalpha1 in TET1 overexpressed cells was detected by Western Blot. (I) Quantification of GFRalpha1 protein levels in TET1 overexpressed cells. p



IHC analysis of GFRA1 using anti-GFRA1 antibody (PB9202). GFRA1 was detected in a paraffin-embedded section of human lung cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml rabbit anti-GFRA1 Antibody (PB9202) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

1 Publications Citing This Product

1. PubMed ID: 33989617, Zhu WQ,Cai NN,Jiang Y,Yang R,Shi JZ,Zhu CL,Zhang BY,Tang B,Zhang XM.Survivable potential of germ cells after trehalose cryopreservation of bovine testicular tissues.Cryobiology.2021 May 11:S0011-2240(21)00081-X.doi:10.1016/j.cryobiol.2021.05.001.Epub ahead of print.PMID:33989617.

Visit bosterbio.com/anti-gfra1-picoband-trade-antibody-pb9202-boster.html to see all 1 publications.

Submit a product review to Biocompare.com

Submit a review of this product to Biocompare.com to receive a \$20 Amazon.com giftcard! Your reviews help your fellow scientists make the right decisions. Thank you for your contribution.



Anti-GDNF Receptor alpha 1/GFRA1 Antibody

For Research Use Only. Not for use in diagnostic procedures.