

**GFR $\alpha$ -1 (IN ) (GDNFR $\alpha$ ) (GDNF receptor). Rabbit Polyclonal Antibody , Human, Mouse, Rat**

Rabbit anti-Glial Cell Derived Neurotrophic Factor Receptor  $\alpha$ -1 (Second Intracellular Loop), Human, Mouse, Rat

**BACKGROUND**

Glial cell line-derived neurotrophic factor (GDNF) is a potent survival factor for central and peripheral neurons and is essential for the development of kidneys and the enteric nerves system. Physiological responses to GDNF require the presence of a novel glycosylphosphatidylinositol linked protein GDNFR $\alpha$ , which is a cell surface receptor for GDNF<sup>1,2</sup>. The cDNAs encoding GDNFR $\alpha$  from human, rat, chicken and mouse have been cloned recently<sup>1-5</sup>. GDNFR $\alpha$  was also termed Ret ligand 1 (RETL1) or TGF- $\beta$ -related neurotrophic factor receptor 1 (TrnR1) and nominated as GFR $\alpha$ -1 recently<sup>5-7</sup>. GFR $\alpha$ -1 binds GDNF specifically and mediates activation of the Ret protein tyrosine kinase (PTK). Thus, GDNF, GFR $\alpha$  and the Ret PTK form a complex to transduce GDNF signal and to mediate GDNF function.

**ORDERING INFORMATION**

**CATALOG NUMBER**  
X1138P

**SIZE**  
100  $\mu$ g

**FORM**  
Unconjugated

**HOST/CLONE**  
Rabbit

**FORMULATION**  
Provided in phosphate buffered saline solution containing 0.02% sodium azide as a preservative

**CONCENTRATION**  
0.5 mg/ml

**ISOTYPE**  
IgG

**APPLICATIONS**  
Western Blot

**IMMUNOGEN**

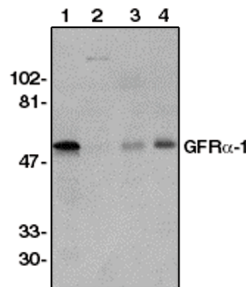
Synthetic peptide corresponding to amino acids 369 to 382 of human GFR $\alpha$ -1

**SPECIES REACTIVITY**

Human, Mouse, Rat

**Legend:**

Western blot analysis using GFR $\alpha$ -1 antibody (Cat. No. X1138P) on human brain (1), liver (2), kidney (3) and spleen (4) crude membrane fractions.



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**POSITIVE CONTROL/TISSUE EXPRESSION**

Human brain tissue lysate

**COMMENTS**

Detects human GFR $\alpha$ -1 by Western blot at 1  $\mu$ g/ml. Optimal concentration should be evaluated by serial dilutions.

**SHIP CONDITIONS**

Ship at ambient temperature, freeze upon arrival

**STORAGE CUSTOMER**

Product should be stored at -20°C. Aliquot to avoid freeze/thaw cycles

**STABILITY**

Products are stable for one year from purchase when stored properly

**REFERENCES**

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2. Treanor, J.J.S., et al. "Characterization of a multicomponent receptor for GDNF." Nature 1996, 382, 80-83.
3. Sanicola, M., et al. "Glial cell line-derived neurotrophic factor-dependent RET activation can be mediated by two different cell-surface accessory proteins." Proc. Natl. Acad. Sci. USA 1997, 94, 6238-6243
4. Buj-Bello, A., et al. "Neurturin responsiveness requires a GPI-linked receptor and the Ret receptor tyrosine kinase." Nature 1997, 387, 721-724
5. Dey, B.K., et al. "Cloning of a novel murine isoform of the glial cell line-derived neurotrophic factor receptor." Neuroreport 1998, 9, 37-42
6. Baloh RH, et al. "TrnR2, a novel receptor that mediates neurturin and GDNF signaling through Ret." Neuron 1997, 18, 793-802
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