

Neuropeptide Y Receptor (Y₁) Polyclonal Antibody

Product Specifications

| | | | | | |
|----------------------------|--|---------|---|------------|---|
| Catalog Number: | 905-798-100 | | | | |
| Host: | Rabbit | | | | |
| Species Reactivity: | Human, Mouse, Rat Other species not tested | | | | |
| Applications: | WB: Yes Membrane ELISA*: Yes Other applications not tested. <i>The optimal dilution for a specific application must be determined by the investigator.</i> <i>*Under certain conditions, this antibody has been shown to display activation-state specificity. The dilution required to achieve activation-state specificity will vary, and should be optimized by the researcher⁹.</i> | | | | |
| Predicted M.W.: | Predicted ~44 kDa. Higher m.w. species (~80 kDa) also observed which may reflect post-translational modification or dimerization of the receptor ⁸ . | | | | |
| Concentration: | See product label | | | | |
| Purification: | Peptide Affinity | | | | |
| Format: | PBS, 50% glycerol, 0.01% sodium azide | | | | |
| Storage: | Store at -20°C <i>Shipping conditions may differ from the recommended storage temperature.</i> | | | | |
| Immunogen: | Synthetic peptide derived from sequence near the amino-terminus of rat Neuropeptide Y Receptor (Y ₁) | | | | |
| Related Products: | <table border="0"> <tr> <td>SAB-300</td> <td>Goat anti-Rabbit IgG Polyclonal Antibody, HRP Conjugate</td> </tr> <tr> <td>ABS 028-08</td> <td>Neuropeptide Y (human, NPY) Monoclonal Antibody</td> </tr> </table> | SAB-300 | Goat anti-Rabbit IgG Polyclonal Antibody, HRP Conjugate | ABS 028-08 | Neuropeptide Y (human, NPY) Monoclonal Antibody |
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Background:

Neuropeptide Y (NPY) and the closely related peptide YY (PYY) and pancreatic polypeptide (PP) are a family of 36-amino acid, tyrosine-rich peptides with amidated C-terminal ends that are known to regulate gastrointestinal and central nervous system functions including food intake and the inhibition of anxiety^{1,2}. Four functional NPY receptors (Y₁/Y₂/Y₄/Y₅) have been identified to date, with a fifth (Y₆) being a non-functional receptor in primates that is absent from the rat genome. Y₁, Y₂, and Y₅ receptors preferentially bind NPY and PYY, while the Y₄ receptor preferentially binds PP. All four receptors signal via coupling to G_{i/o} alpha subunits, inhibiting adenylyl cyclase activity, thereby decreasing intracellular cAMP levels³. Y₁ receptor deficient mice display a variety of physical and behavioral phenotypes including obesity, hyperinsulinemia, and increased territorial behavior⁴⁻⁶.

References:

- Larhammar, D. (1996) Regul Pept **62**, 1-11.
- Michel, M.C., et al. (1998) Pharmacol Rev. **50**, 143-150.
- Krause, J., et al. (1992) Mol Pharmacol. **41**, 817-821.
- Kushi, A., et al. (1998) Proc Natl Acad Sci USA **95**, 15659-15664.
- Burcelin, R., et al. (2001) Peptides **22**, 421-427.
- Karl, T., et al. (2004) Proc Natl Acad Sci USA **101**, 12742-12747.
- Allen, A.R., et al. (2006) J Pharmacol Exp Ther. **319**, 1286-1296.
- Ouedraogo, M., et al. (2008) Traffic **9**, 305-324.
- Gupta, A., et al. (2007) J Biol Chem. **282**, 5116-5124.



Visit the Scientific Resources section of our website for ELISA, IHC, and WB protocols.

Generally reagents are good for one year from the date of receipt, except for conjugates which are good for six months and reagents with an expiration date indicated on the label or other supporting document.

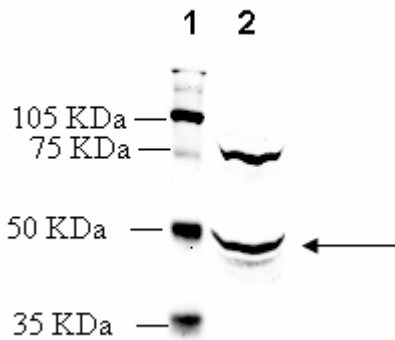
Assay Designs makes every effort to provide a consistent source of high quality polyclonal antibodies. However, due to variations inherent in this technology, investigators are urged to purchase sufficient quantities of a specific lot number if an identical antibody is required throughout a study.

(OVER)

FOR RESEARCH USE ONLY; NOT FOR THERAPEUTIC OR DIAGNOSTIC USE

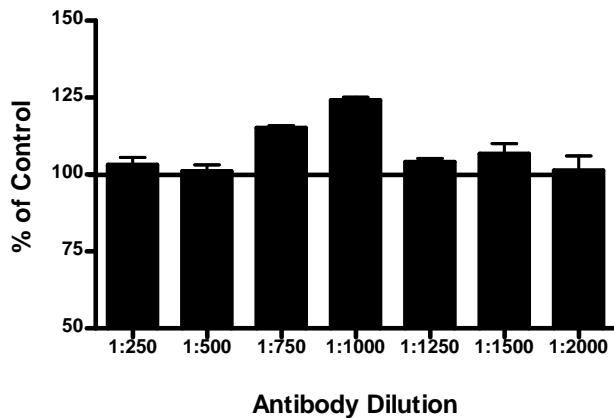
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Western Blot Analysis: MW marker (1) and 20 µg rat brain extract (2) probed with Neuropeptide Y Receptor (Y₁) Polyclonal Antibody at 5.1 µg/mL.

Kidney Membranes



Membrane ELISA: Lewis rat heart membranes (5 µg/well) were treated with 1 µM concentrations of agonist (NPY) and probed with Neuropeptide Y Receptor (Y₁) Polyclonal Antibody (1:250 to 1:2000 of a 1 µg/µL stock solution) by ELISA. Data from vehicle treated cells were taken as 100%. Results are the mean ± SEM (n= 4).