

Ghrelin Receptor (GHS-R) Polyclonal Antibody

Product Specifications

Catalog Number:	905-792-100								
Host:	Rabbit								
Species Reactivity:	Rat (predicted to react with human and mouse based on epitope sequence identity) 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 specificity⁵. The dilution required to achieve activation-state specificity will vary, and should be optimized by the researcher.</i>								
Predicted M.W.:	~41 kDa. Higher m.w. species (~75 kDa) and intermediates also observed which reflect post-translational modification and heterodimerization of the receptor ⁶ .								
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 Ghrelin Receptor (GHS-R)								
Related Products:	<table border="0"> <tr> <td>SAB-300</td> <td>Goat anti-Rabbit IgG Polyclonal Antibody, HRP Conjugate</td> </tr> <tr> <td>900-066</td> <td>cyclic AMP (direct) EIA Kit</td> </tr> <tr> <td>900-163</td> <td>cyclic AMP Complete EIA Kit</td> </tr> <tr> <td>900-067</td> <td>cyclic AMP EIA Kit</td> </tr> </table>	SAB-300	Goat anti-Rabbit IgG Polyclonal Antibody, HRP Conjugate	900-066	cyclic AMP (direct) EIA Kit	900-163	cyclic AMP Complete EIA Kit	900-067	cyclic AMP EIA Kit
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Background:

Ghrelin is a multifunctional peptide hormone secreted from the anterior pituitary known to affect many physiological processes including the release of growth hormone, appetite regulation, gastric acid secretion, gastrointestinal motility, and blood pressure regulation¹. The 28 amino acid ghrelin peptide is modified at Ser3 by addition of a fatty acid group (i.e., n-octanoyl) that is essential for its biological activity². The ghrelin receptor (GHS-R) is a seven transmembrane (7-TM) GPCR that is expressed in the hippocampus, pituitary, and hypothalamus, as well as in peripheral tissues including the heart, lung, liver, kidney, pancreas, intestines, and immune cells¹. Ghrelin signals are primarily relayed via coupling of the GHS-R to G_{q/11} alpha subunits, promoting stimulation of phospholipase C, and an increase in intracellular calcium⁴. Stimulation of adenylyl cyclases and increased cAMP are also induced by GHS-R activation. In humans and swine, two splice variants of the ghrelin receptor are expressed from the same gene³. The GHS-R 1(a) receptor is the 366 amino acid, 7-TM form, while GHS-R 1(b) is a 289 amino acid, 5-TM form that is truncated at the C-terminus and is pharmacologically inactive. The epitope recognized by this antibody is unaffected by alternative splicing.

References:

1. Kojima, M. and Kangawa, K. (2005) *Physiol Rev.* **85**, 495-522.
2. Hosoda, H., et al. (2003) *J Biol Chem.* **278**, 64-70.
3. Howard, A.D., et al. (1996) *Science* **273**, 974-977.
4. Malagon, M.M., et al. (2003) *Endocrinology* **144**, 5372-5380.
5. Gupta, A., et al. (2007) *J Biol Chem.* **282**, 5116-5124.
6. Wheatley, M., et al. (2005) *Physiol Rev.* **85**, 495-522.



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.

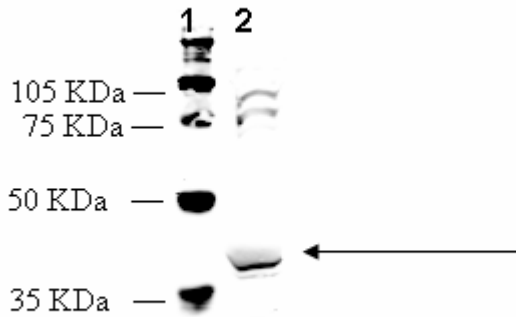
Assay Designs makes every effort to provide a consistent source of high quality polyclonal antibodies. However, due to variations inherent in this technology, investigators are urged to purchase sufficient quantities of a specific lot number if an identical antibody is required throughout a study.

(OVER)

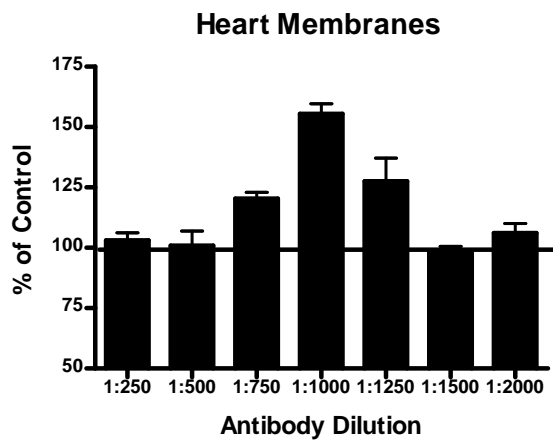
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Last Revised: 9-26-2008



Western Blot Analysis: MW marker (1) and 20 µg rat heart extract (2) probed with Ghrelin Receptor (GHS-R) Polyclonal Antibody 8.5 µg/mL.



Membrane ELISA: Lewis rat heart membranes (5 µg/well) were treated with 1 µM concentrations of agonist (Ghrelin) and probed with Ghrelin Receptor (GHS-R) 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).