

Product Specification Sheet

Ghrelin Antibodies

Cat. GHS13-M

Mouse Monoclonal Anti-Human Ghrelin IgG #3

SIZE: 100 ug

Growth hormone (GH), produced and released from the anterior pituitary, controls body growth, carbohydrate–protein–lipid metabolism and water–electrolyte balance. GH secretagogues (GHSs) are synthetic compounds that are potent stimulators of GH release. GHSs, act through a novel orphan G-protein-coupled receptor (GPCR), the **GHS receptor (GHS-R)**. **Ghrelin** ('ghre' is the Proto-Indo-European root of the word "grow") has been purified and identified from rat and human stomach as the endogenous ligand for the GHS-R. The rat and human mature Ghrelin (28-aa) are produced from 117 amino acids precursor. In rat stomach, a 28-aa **Ghrelin** and **des-Gln14-Ghrelin** (deletion of Gln14) are produced due to alternative splicing of Ghrelin mRNA. The activity of both Ghrelins is the same. However, des-Gln14-Ghrelin is only present in low amounts in the stomach, indicating that Ghrelin is the major active form. Ghrelin has an unusual modification at Ser3 residue that is **n-octanoylated** and it is essential for biological activity. Ghrelin is the first known example of a bioactive peptide modified by an acyl acid.

Rat Ghrelin is expressed in the stomach, small and large intestines, and brain regions (hypothalamic arcuate nucleus) that are involved in the regulation of food intake. Both Ghrelin and GHS-R expression is detected in the heart, suggesting that Ghrelin might have some cardiovascular effects. Ghrelin administration stimulates GH secretion but also causes weight gain by increasing food intake and reduction in fat utilization and anti-Ghrelin IgG administration suppressed feeding.

Source of Antigen and Antibodies

Purified human ghrelin was and injected into mice. A clone secreting antibodies to human ghrelin was expanded as ascites, and IgG2a (cat # GHS13-M) purified by protein A/G column. It is supplied in 100 ul/vial in PBS pH 7.4 (liquid or lyophilized) and 0.05% azide. Reconstitute in PBS pH 7.4 or other buffers. Store powder at 4 oC. Reconstituted IgG should be aliquoted and stored frozen at –20oC or below.

Form & Storage of Antibodies/Peptide Control

Affinity pure IgG

100 ug/100ul solution lyophilized powder
Supplied in **Buffer:** PBS+0.1% BSA
Reconstitute powder in PBS at 1mg/ml

Storage

Short-term: unopened, undiluted liquid vials at -20oC and powder at 4oC or -20oC..

Long-term: at –20oC or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at –20oC or below.

Shipping: 4oC for solutions and room temp for powder

Recommended Usage

Western Blotting (1:1K-5K for neat serum and 1-10 ug/ml for affinity pure using Chemiluminescence technique). An antibody made to the ERAB11 epitope has detected ~ 27 kDa protein in the brain.

ELISA (1:10K-1:100K; using 50-100 ng of control peptide/well).

Histochemistry & Immunofluorescence. We recommend the use of affinity purified antibody at 10-30 ug/ml in formaldehyde fixed, paraffin-embedded tissues (1).

Specificity & Cross-reactivity

Antibodies react with human Ghrelin. Antibody cross-reactivity in various species has not been studied.

Full length ghrelin and des-ghrelin (acylated and non-acylated) are also available for antibody and other studies.

General References: (1) Kojima M et al (1999) Nature 402, 656; Hosoda H et al (2000) J. Biol. Chem. 275, 2199; Nakazato M et al (2001) Nature 409, 194; Tschoep et al (2000) Nature 407; 908.

*This product is for in vitro research use only.

Some New Antibodies from ADI...

- Neuromedin U, NMU and NMUR1/2, Neurotensin & NTR1-3 receptors, Motilin and Motilin receptor, Orexin and orexin receptors, CART, and Leptin receptors

Western Blot recycling kit (Use the same blot to probe with multiple antibodies) **recycle blot in 5-10 min.**

Study distribution of proteins in **pre-made protein blots of brain, kidney, GI-tract, and major tissues**

GHS13-M

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