

## ghrelin (2F4): sc-293422



The Power to Question

## BACKGROUND

Small synthetic molecules called growth-hormone secretagogues (GHSs) act through GSH-R to stimulate the release of GH from the pituitary. Ghrelin is an endogenous ligand for the growth hormone secretagogue receptor (GHS-R). Ghrelin and GHRH are involved in the regulation of GH release from the pituitary. GHRH exerts its action through high-affinity GHRH receptors (GHRH-R) present in the anterior pituitary. The acylated peptide of ghrelin specifically releases GH both *in vivo* and *in vitro* and is found in stomach tissue. GH plays a crucial role in stimulating and controlling the growth, metabolism and differentiation of many mammalian cell types by modulating the synthesis of multiple mRNA species. The gene encoding ghrelin maps to human chromosome 3p25.3.

## REFERENCES

1. Campbell, R.M., et al. 1992. Evolution of the growth hormone-releasing factor (GRF) family of peptides. *Growth Regul.* 2: 175-191.
2. Mayo, K.E. 1992. Molecular cloning and expression of a pituitary-specific receptor for growth hormone-releasing hormone. *Mol. Endocrinol.* 6: 1734-1744.
3. Howard, A.D., et al. 1996. A receptor in pituitary and hypothalamus that functions in growth hormone release. *Science* 273: 974-977.
4. McKee, K.K., et al. 1997. Molecular analysis of rat pituitary and hypothalamic growth hormone secretagogue receptors. *Mol. Endocrinol.* 11: 415-423.

## CHROMOSOMAL LOCATION

Genetic locus: GHRL (human) mapping to 3p25.3.

## SOURCE

ghrelin (2F4) is a mouse monoclonal antibody raised against amino acids 1-117 representing full length ghrelin of human origin.

## PRODUCT

Each vial contains 100 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

ghrelin (2F4) is recommended for detection of ghrelin of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for ghrelin siRNA (h): sc-39517, ghrelin shRNA Plasmid (h): sc-39517-SH and ghrelin shRNA (h) Lentiviral Particles: sc-39517-V.

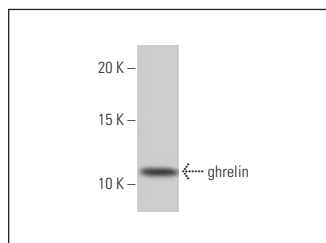
Molecular Weight of ghrelin: 13 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

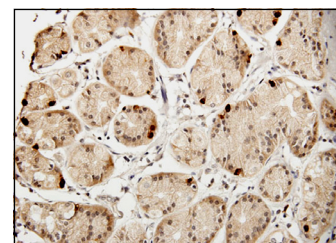
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



ghrelin (2F4): sc-293422. Western blot analysis of ghrelin expression in HeLa whole cell lysate.



ghrelin (2F4): sc-293422. Immunoperoxidase staining of formalin fixed, paraffin-embedded human stomach tissue showing cytoplasmic staining of glandular cells.

## SELECT PRODUCT CITATIONS

1. Lin, Y., et al. 2019. Gut ghrelin regulates hepatic glucose production and Insulin signaling via a gut-brain-liver pathway. *Cell Commun. Signal.* 17: 8.
2. Westermeier, F., et al. 2020. Cytosolic phosphoenolpyruvate carboxykinase is expressed in α-cells from human and murine pancreas. *J. Cell. Physiol.* 235: 166-175.
3. Yong, H.J., et al. 2021. Gene signatures of NEUROGENIN3<sup>+</sup> endocrine progenitor cells in the human pancreas. *Front. Endocrinol.* 12: 736286.
4. Wang, J., et al. 2023. GHRL as a prognostic biomarker correlated with immune infiltrates and progression of precancerous lesions in gastric cancer. *Front. Oncol.* 13: 1142017.
5. Klein, D., et al. 2025. Mapping cells through time and space with moscot. *Nature* 638: 1065-1075.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.