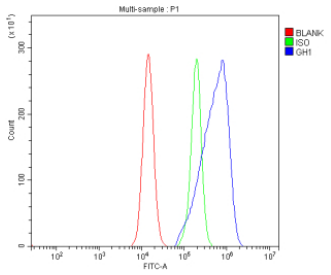
GH1 Antibody / Growth Hormone (FY12550)

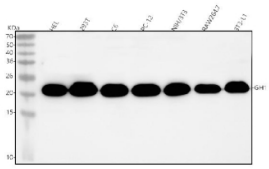
Catalog No.	Formulation	Size
FY12550	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	P01241
Applications	Western Blot : 0.25-0.5ug/ml Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This GH1 antibody is available for research use only.



Flow Cytometry analysis of HEL cells using anti-GH1 antibody. Overlay histogram showing HEL cells stained with (Blue line). The cells were fixed with 4% paraformaldehyde and blocked with 10% normal goat serum. And then incubated with rabbit anti-GH1 antibody (1 ug/million cells) for 30 min at 20oC. DyLight 488 conjugated goat anti-rabbit IgG (5-10 ug/million cells) was used as secondary antibody for 30 minutes at 20oC. Isotype control antibody (Green line) was rabbit IgG (1 ug/million cells) used under the same conditions. Unlabelled sample (Red line) was also used as a control.



Western blot analysis of GH1 using anti-GH1 antibody. Lane 1: human HEL whole cell lysates, Lane 2: human 293T whole cell lysates, Lane 3: rat C6 whole cell lysates, Lane 4: rat PC-12 whole cell lysates, Lane 5: mouse NIH/3T3 whole cell lysates, Lane 6: mouse RAW264.7 whole cell lysates, Lane 7: mouse 3T3-L1 whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-GH1 antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using enhanced chemiluminescent. The expected molecular weight of GH1 is 22-25 kDa.

Description

GH1 antibody detects Growth hormone 1, a peptide hormone secreted by the anterior pituitary gland that stimulates growth, metabolism, and cellular regeneration. GH1 belongs to the somatotropin/prolactin family of hormones and exerts its effects through activation of the growth hormone receptor (GHR) and downstream JAK-STAT signaling pathways. The GH1 antibody is used in endocrinology and metabolic research to study growth regulation, pituitary physiology, and hormone secretion mechanisms.

GH1 is encoded by the GH1 gene located on human chromosome 17q24.2. The mature protein is approximately 22 kilodaltons and derived from a larger precursor that undergoes signal peptide removal and disulfide bond formation in the endoplasmic reticulum. GH1 is stored in secretory granules and released into circulation in response to hypothalamic growth hormone-releasing hormone (GHRH) and inhibited by somatostatin. It plays major roles in postnatal growth, bone development, and metabolic homeostasis.

The GH1 antibody detects the 22 kilodalton hormone by western blot and shows strong cytoplasmic granule staining in pituitary somatotrophs by immunofluorescence. GH1 binds to its receptor on target tissues, activating JAK2 and STAT5 pathways that induce insulin-like growth factor 1 (IGF1) production in the liver and peripheral tissues. Through IGF1 and direct signaling, GH1 stimulates protein synthesis, lipolysis, and glucose utilization.

Aberrations in GH1 production cause growth disorders, including gigantism and acromegaly from overproduction, or growth hormone deficiency due to pituitary malfunction or genetic mutation. Outside growth regulation, GH1 contributes to immune function, cardiac performance, and metabolic adaptation under stress conditions. Elevated GH1 and IGF1 signaling are also linked to cancer cell proliferation and survival.

Because of its central endocrine function, GH1 serves as a key biomarker in clinical diagnostics and metabolic studies. NSJ Bioreagents provides a validated GH1 antibody optimized for western blot, flow cytometry, and hormone localization assays, supporting detailed investigation of pituitary function, growth signaling, and endocrine regulation.

Application Notes

Optimal dilution of the GH1 antibody should be determined by the researcher.

Immunogen

E.coli-derived human GH1 recombinant protein (Position: Q22-F217) was used as the immunogen for the GH1 antibody.

Storage

After reconstitution, the GH1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.