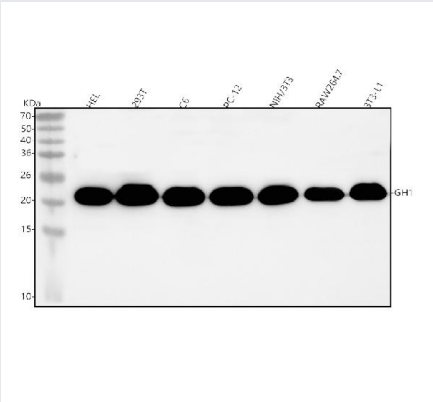
GH1 Antibody – Rabbit Polyclonal

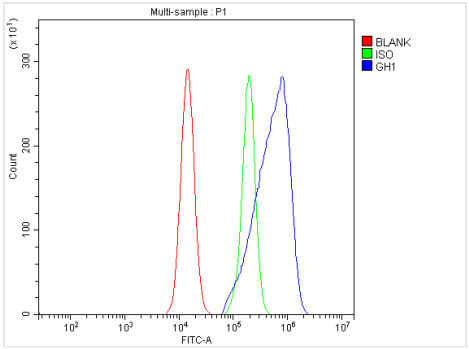
PRODUCT OVERVIEW

Product Name	GH1, Polyclonal Antibody
Full Product Name	Anti-GH1 Antibody Picoband
Product Gene Name	anti-GH1 antibody
Clonality	Polyclonal
Host	Rabbit
Species Reactivity	Human, Mouse, Rat
Form/Format	Lyophilized. Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
Purity/Purification	Immunogen affinity purified.
Preparation and Storage	At -20 degree C for one year from date of receipt. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for six months.Avoid repeated freezing and thawing.
Molecular Weight	217
OMIM	phenotype 612781
3D Structure	ModBase 3D Structure for P01241
Immunogen	E coli-derived human GH1 recombinant protein (Position: Q22-F217).
Reconstitution	Adding 0.2 ml of distilled water will yield a concentration of 500ug/ml.
Product Categories/Family for anti-GH1 antibody	Primary Antibodies
ISO Certification	Manufactured in an ISO 13485:2003 and EN ISO 13485:2012 Certified Laboratory.
Applications Tested/Suitable for anti-GH1 antibody	Western Blot (WB), Flow Cytometry (FC/FACS), ELISA (EIA)
Application Notes for anti-GH1 antibody	WB: 0.25-0.5ug/ml, Human, Mouse, Rat FC/FACS (Fixed): 1-3ug/1x10^6 cells, Human ELISA: 0.1-0.5ug/ml
Related Product Information for anti-GH1 antibody	The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Product References and Citations for anti-GH1 antibody	1. Niall, H. D.; Hogan, M. L.; Sauer, R.; Rosenblum, I. Y.; Greenwood, F. C. : Sequence of pituitary and placental lactogenic and growth hormones: evolution from a primordial peptide by gene reduplication. Proc. Nat. Acad. Sci. 68: 866-869, 1971.2. Sundstrom, M.; Lundqvist, T.; Rodin, J.; Giebel, L. B.; Milligan, D.; Norstedt, G. : Crystal structure of an antagonist mutant of human growth hormone, G120R, in complex with its receptor at 2.9 angstrom resolution. J. Biol. Chem. 271: 32197-32203, 1996.
Other Notes	Small volumes of anti-GH1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for GH1 purchase	MBS1758119 is an antibody targeting GH1. Also known as Anti-GH1 Antibody Picoband. Reactive in Human, Mouse, Rat. Host: Rabbit.



Western Blot (WB) of anti-GH1 antibody

Figure 1. Western blot analysis of GH1 using anti-GH1 antibody (MBS1758119).Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel)/90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.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 antigen affinity purified polyclonal antibody (#MBS1758119) at 0.5ug/mL overnight at 4 degree C, 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 is developed using an Enhanced Chemiluminescent detection (ECL) kit (#MBS176460) with Tanon 5200 system. A specific band was detected for GH1 at approximately 22 kDa. The expected band size for GH1 is at 25 kDa.



Flow Cytometry (FC/FACS) of anti-GH1 antibody

Figure 2. Flow Cytometry analysis of HEL cells using anti-GH1 antibody (MBS1758119).Overlay histogram showing HEL cells stained with MBS1758119 (Blue line). The cells were fixed with 4% paraformaldehyde and blocked with 10% normal goat serum. And then incubated with rabbit anti-GH1 Antibody (MBS1758119, 1ug/1x106 cells) for 30 min at 20 degree C. DyLight488 conjugated goat anti-rabbit IgG (MBS177405, 5-10ug/1x106 cells) was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x106) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for GH1. It may not necessarily be applicable to this product.

NCBI GI #	134703
NCBI GeneID	2688
NCBI Accession #	P01241.2
UniProt Primary Accession #	P01241
UniProt Secondary Accession #	Q14405; Q16631; Q5EB53; Q9HBZ1; Q9UMJ7; Q9UNL5; A6NEF6
UniProt Related Accession #	P01241
NCBI Official Full Name	Somatotropin
NCBI Official Synonym Full Names	growth hormone 1
NCBI Official Symbol	GH1
NCBI Official Synonym Symbols	GH; GHN; GH-N; hGH-N; IGHD1B
UniProt Protein Name	Somatotropin
UniProt Synonym Protein Names	Growth hormone; GH; GH-N; Growth hormone 1; Pituitary growth hormone
Protein Family	Somatotropin
UniProt Gene Name	GH1
UniProt Synonym Gene Names	GH; GH-N
UniProt Entry Name	SOMA_HUMAN
NCBI Protein Information	somatotropin; pituitary growth hormone

NCBI Summary for GH1	The protein encoded by this gene is a member of the somatotropin/prolactin family of hormones which play an important role in growth control. The gene, along with four other related genes, is located at the growth hormone locus on chromosome 17 where they are interspersed in the same transcriptional orientation; an arrangement which is thought to have evolved by a series of gene duplications. The five genes share a remarkably high degree of sequence identity. Alternative splicing generates additional isoforms of each of the five growth hormones, leading to further diversity and potential for specialization. This particular family member is expressed in the pituitary but not in placental tissue as is the case for the other four genes in the growth hormone locus. Mutations in or deletions of the gene lead to growth hormone deficiency and short stature. [provided by RefSeq, Jul 2008]
UniProt Comments for GH1	GH: Plays an important role in growth control. Its major role in stimulating body growth is to stimulate the liver and other tissues to secrete IGF-1. It stimulates both the differentiation and proliferation of myoblasts. It also stimulates amino acid uptake and protein synthesis in muscle and other tissues. Defects in GH1 are a cause of growth hormone deficiency isolated type 1A (IGHD1A); also known as pituitary dwarfism I. IGHD1A is an autosomal recessive deficiency of GH which causes short stature. IGHD1A patients have an absence of GH with severe dwarfism and often develop anti-GH antibodies when given exogenous GH. Defects in GH1 are a cause of growth hormone deficiency isolated type 1B (IGHD1B); also known as dwarfism of Sindh. IGHD1B is an autosomal recessive deficiency of GH which causes short stature. IGHD1B patients have low but detectable levels of GH. Dwarfism is less severe than in IGHD1A and patients usually respond well to exogenous GH. Defects in GH1 are the cause of Kowarski syndrome (KWKS); also known as pituitary dwarfism VI. Defects in GH1 are a cause of growth hormone deficiency isolated type 2 (IGHD2). IGHD2 is an autosomal dominant deficiency of GH which causes short stature. Clinical severity is variable. Patients have a positive response and immunologic tolerance to growth hormone therapy. Belongs to the somatotropin/prolactin family. 4 isoforms of the human protein are produced by alternative splicing. Protein type: Secreted; Secreted, signal peptide; Hormone Chromosomal Location of Human Ortholog: 17q24.2 Cellular Component: extracellular space; extracellular region Molecular Function: protein binding; growth hormone receptor binding; growth factor activity; prolactin receptor binding; hormone activity; metal ion binding Biological Process: positive regulation of phosphoinositide 3-kinase cascade; positive regulation of insulin-like growth factor receptor signaling pathway; positive regulation of MAP kinase activity; positive regulation of peptidyl-tyrosine phosphorylation; positive regulation of tyrosine phosphorylation of Stat5 protein; positive regulation of receptor internalization; positive regulation of JAK-STAT cascade; glucose transport; positive regulation of multicellular organism growth; JAK-STAT cascade; response to estradiol stimulus; positive regulation of tyrosine phosphorylation of Stat3 protein Disease: Isolated Growth Hormone Deficiency, Type Ia; Isolated Growth Hormone Deficiency, Type Ib; Isolated Growth Hormone Deficiency, Type Ii; Kowarski Syndrome
Research Articles on GH1	**1.** In this review we highlight the evidence of extrapituitary synthesis of GH in humans. [review]
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