

# GHR (B-12): sc-137184

## BACKGROUND

GHR (growth hormone receptor) binds growth hormone (GH), which is produced by the anterior pituitary and regulates body growth and other metabolic processes. GHR is an integral membrane protein and a member of the cytokine receptor family. A common characteristic of the cytokine receptor family is having soluble forms of the protein. The soluble form of GHR is GH-binding protein (GHBP), which is generated by the proteolytic cleavage of the extracellular domain of GHR. Reduced levels of GHBP are associated with GH insensitivity syndrome (GHIS). GHR has been shown to be transcribed via at least two different promoters, resulting in GHR 1A and GHR 1B. Both GHR 1A and 1B are expressed in liver, whereas GHR 1B is also expressed in muscle, uterus, and ovary tissues.

## REFERENCES

1. Dastot, F., Sobrier, M.L., Duquesnoy, P., Duriez, B., Goossens, M. and Amselem, S. 1996. Alternatively spliced forms in the cytoplasmic domain of the human growth hormone (GH) receptor regulate its ability to generate a soluble GH-binding protein. *Proc. Natl. Acad. Sci. USA* 93: 10723-10728.
2. Bick, T., Amit, T., Mansur, M., Bar-Am, O., Youdim, M.B. and Hochberg, Z. 1996. Regulation of cellular rabbit growth hormone (GH) receptor and GH-binding protein generation *in vitro*. *Endocrinology* 137: 3977-3985.
3. Iida, K., Takahashi, Y., Kaji, H., Nose, O., Okimura, Y., Abe, H. and Chihara, K. 1998. Growth hormone (GH) insensitivity syndrome with high serum GH-binding protein levels caused by a heterozygous splice site mutation of the GH receptor gene producing a lack of intracellular domain. *J. Clin. Endocrinol. Metab.* 83: 531-537.
4. Ross, R.J. 1999. The GH receptor and GH insensitivity. *Growth Horm. IGF Res.* 9: 42-45.
5. Amit, T., Youdim, M.B. and Hochberg, Z. 2000. Clinical review 112: Does serum growth hormone (GH) binding protein reflect human GH receptor function? *J. Clin. Endocrinol. Metab.* 85: 927-932.

## CHROMOSOMAL LOCATION

Genetic locus: GHR (human) mapping to 5p13.1; Ghr (mouse) mapping to 15 A1.

## SOURCE

GHR (B-12) is a mouse monoclonal antibody raised against amino acids 339-638 of GHR of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## 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.

## APPLICATIONS

GHR (B-12) is recommended for detection of GHR of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for GHR siRNA (h): sc-40015, GHR siRNA (m): sc-40016, GHR shRNA Plasmid (h): sc-40015-SH, GHR shRNA Plasmid (m): sc-40016-SH, GHR shRNA (h) Lentiviral Particles: sc-40015-V and GHR shRNA (m) Lentiviral Particles: sc-40016-V.

Molecular Weight of GHR precursor: 110 kDa.

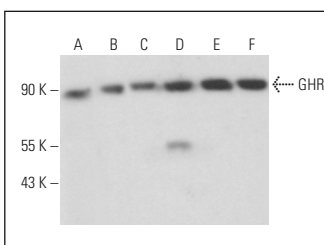
Molecular Weight of glycosylated mature GHR: 140 kDa.

Positive Controls: Hep G2 whole cell lysate: sc-2227, HeLa whole cell lysate: sc-2200 or L8 whole cell lysate: sc-3807.

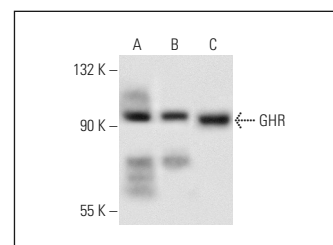
## RECOMMENDED SUPPORT REAGENTS

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.

## DATA



GHR (B-12): sc-137184. Western blot analysis of GHR expression in Hep G2 (A), MCF7 (B), PC-12 (C), Sol8 (D), Raji (E) and Jurkat (F) whole cell lysates.



GHR (B-12): sc-137184. Western blot analysis of GHR expression in Hep G2 (A), HeLa (B) and L8 (C) whole cell lysates.

## PROTOCOLS

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



See **GHR (B-10): sc-137185** for GHR antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.