

# GFRP (H-16): sc-22696

## BACKGROUND

GTP cyclohydrolase I feedback regulatory protein (GFRP) is encoded by the gene GCHFR. GFRP mediates feedback inhibition of GTP cyclohydrolase I activity by tetrahydrobiopterin. GFRP also acts as a mediator for the stimulatory effect of phenylalanine on enzyme activity. L-phenylalanine reverses this inhibition. Cross-linking experiments have shown that GFRP is usually expressed as a homodimer or pentamer.

## REFERENCES

- Hochstrasser, D.F., et al. 1992. Human liver protein map: a reference database established by microsequencing and gel comparison. *Electrophoresis* 13: 992-1001.
- Milstien, S., et al. 1996. Purification and cloning of the GTP cyclohydrolase I feedback regulatory protein, GFRP. *J. Biol. Chem.* 271: 19743-19751.
- Yoneyama, T., et al. 1997. GTP cyclohydrolase I feedback regulatory protein is a pentamer of identical subunits. Purification, cDNA cloning, and bacterial expression. *J. Biol. Chem.* 272: 9690-9696.
- Bader, G., et al. 2001. Crystal structure of rat GTP cyclohydrolase I feedback regulatory protein, GFRP. *J. Mol. Biol.* 312: 1051-1057.
- Maita, N., et al. 2004. Structural basis of biopterin-induced inhibition of GTP cyclohydrolase I by GFRP, its feedback regulatory protein. *J. Biol. Chem.* 279: 51534-51540.
- Swiss-Prot/TrEMBL (P30047). World Wide Web URL: <http://www.expasy.ch/sprot/sprot-top.html>

## CHROMOSOMAL LOCATION

Genetic locus: GCHFR (human) mapping to 15q15.1; Gchfr (mouse) mapping to 2 E5.

## SOURCE

GFRP (H-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of GFRP of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-22696 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## PROTOCOLS

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

## APPLICATIONS

GFRP (H-16) is recommended for detection of GFRP of mouse, rat and 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

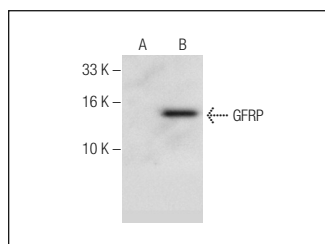
Suitable for use as control antibody for GFRP siRNA (h): sc-105393, GFRP siRNA (m): sc-145387, GFRP shRNA Plasmid (h): sc-105393-SH, GFRP shRNA Plasmid (m): sc-145387-SH, GFRP shRNA (h) Lentiviral Particles: sc-105393-V and GFRP shRNA (m) Lentiviral Particles: sc-145387-V.

Positive Controls: GFRP (h): 293T Lysate: sc-372605.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



GFRP (H-16): sc-22696. Western blot analysis of GFRP expression in non-transfected: sc-117752 (A) and human GFRP transfected: sc-372605 (B) 293T whole cell lysates.

## RESEARCH USE

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

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Try **GFRP (D-11): sc-514098** or **GFRP (A-8): sc-514199**, our highly recommended monoclonal alternatives to GFRP (H-16).