

# GRHPR (H-115): sc-134702

## BACKGROUND

GRHPR (glyoxylate reductase/hydroxypyruvate reductase), also known as GLXR, is a member of the D-isomer specific 2-hydroxyacid dehydrogenase family of proteins. Localizing to the cytosol, GRHPR is ubiquitously expressed with highest expression levels found in liver. Functioning as a homodimer, GRHPR plays a role in metabolism by removing the highly reactive two carbon acid by-product glyoxylate through a reduction reaction which yields glycolate. In addition, GRHPR contains hydroxypyruvate reductase activity and D-glycerate dehydrogenase activity. Mutations in the gene encoding GRHPR that impair its ability to reduce glyoxylate can result in primary hyperoxaluria type II (PH2 or HP2), a disease characterized by the formation of kidney stones, increased urinary excretion of L-glycerate and oxalate and renal failure.

## REFERENCES

1. Cramer, S.D., et al. 1999. The gene encoding hydroxypyruvate reductase (GRHPR) is mutated in patients with primary hyperoxaluria type II. *Hum. Mol. Genet.* 8: 2063-2069.
2. Rumsby, G. and Cregeen, D.P. 1999. Identification and expression of a cDNA for human hydroxypyruvate/glyoxylate reductase. *Biochim. Biophys. Acta* 1446: 383-388.

## CHROMOSOMAL LOCATION

Genetic locus: GRHPR (human) mapping to 9p13.2; Grhpr (mouse) mapping to 4 B1.

## SOURCE

GRHPR (H-115) is a rabbit polyclonal antibody raised against amino acids 86-200 mapping within an internal region of GRHPR 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.

## APPLICATIONS

GRHPR (H-115) is recommended for detection of GRHPR 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).

GRHPR (H-115) is also recommended for detection of GRHPR in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for GRHPR siRNA (h): sc-92675, GRHPR siRNA (m): sc-145763, GRHPR shRNA Plasmid (h): sc-92675-SH, GRHPR shRNA Plasmid (m): sc-145763-SH, GRHPR shRNA (h) Lentiviral Particles: sc-92675-V and GRHPR shRNA (m) Lentiviral Particles: sc-145763-V.

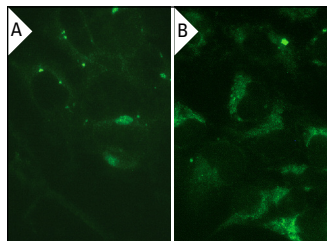
Molecular Weight of GRHPR: 36 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206 or Hep G2 cell lysate: sc-2227.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



GRHPR (H-115): sc-134702. Immunofluorescence staining of methanol-fixed untransfected (A) and human GRHPR transfected HEK 293 cells (B).

## 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) or our catalog for detailed protocols and support products.

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Try **GRHPR (D-2): sc-271494**, our highly recommended monoclonal alternative to GRHPR (H-115).