

# GI Syn (FL-373): sc-9067

## BACKGROUND

Glutamine synthetase (GI Syn) forms a homo-octamer that serves as a catalyst for the amination of glutamic acid to form glutamine. This enzyme is a marker for astrocytes, which serve as the primary site of conversion of glutamic acid to glutamine in the brain. Induction of glutamine synthetase is seen upon astrocyte cell contact with neurons. Elevated expression of glutamine synthetase in glial cells has been shown to protect neurons from degeneration due to excess glutamate. Glutamine synthetase is also present in the liver and is involved in nitrogen homeostasis. Overexpression of glutamine synthetase has been shown in primary liver cancers, indicating a potential role for glutamine synthetase in hepatocyte transformation.

## CHROMOSOMAL LOCATION

Genetic locus: GLUL (human) mapping to 1q25.3; Glul (mouse) mapping to 1 G3.

## SOURCE

GI Syn (FL-373) is a rabbit polyclonal antibody raised against amino acids 1-373 representing full length GI Syn 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

GI Syn (FL-373) is recommended for detection of GI Syn 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).

GI Syn (FL-373) is also recommended for detection of GI Syn in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for GI Syn siRNA (h): sc-35481, GI Syn siRNA (m): sc-35482, GI Syn shRNA Plasmid (h): sc-35481-SH, GI Syn shRNA Plasmid (m): sc-35482-SH, GI Syn shRNA (h) Lentiviral Particles: sc-35481-V and GI Syn shRNA (m) Lentiviral Particles: sc-35482-V.

Molecular Weight of GI Syn: 49 kDa.

Positive Controls: rat brain extract: sc-2392, GI Syn (m): 293T Lysate: sc-120492 or Hep G2 cell lysate: sc-2227.

## STORAGE

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

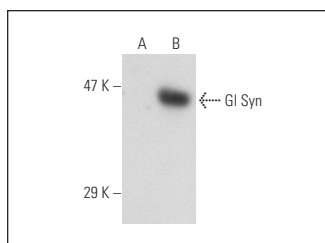
## PROTOCOLS

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

## RESEARCH USE

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

## DATA



GI Syn (FL-373): sc-9067. Western blot analysis of GI Syn expression in non-transfected: sc-117752 (A) and mouse GI Syn transfected: sc-120492 (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS

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- Wang, Y.F., et al. 2013. Hyposmolality differentially and spatiotemporally modulates levels of glutamine synthetase and serine racemase in rat supraoptic nucleus. *Glia* 61: 529-538.
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- Zhao, A., et al. 2013. Transiently transfected purine biosynthetic enzymes form stress bodies. *PLoS ONE* 8: e56203.

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