

# UGP2 (B-3): sc-377089

## BACKGROUND

UGP2 (UDP-glucose pyrophosphorylase 2), also known as UDPG, UGPP2, UDPGP2 or pHC379, is an evolutionarily conserved protein belonging to the UDPGP type 1 family of proteins. Localizing to the cytoplasm, UGP2 forms homooligomers and is believed to function as a glucosyl donor in cellular metabolic pathways. More specifically, UGP2 catalyzes the transfer of a glucose moiety from glucose-1-phosphate to UTP, producing a diphosphate and UDP-glucose. UDP-glucose is an essential precursor for the synthesis of polysaccharides; in liver and muscle, UDP-glucose is a precursor of glycogen, in liver UDP-glucose is also a precursor of UDP-glucuronate, and in lactating mammary gland UDP-glucose is converted to UDP-galactose and then to lactose.

## CHROMOSOMAL LOCATION

Genetic locus: UGP2 (human) mapping to 2p15; Ugp2 (mouse) mapping to 11 A3.1.

## SOURCE

UGP2 (B-3) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of UGP2 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

UGP2 (B-3) is available conjugated to agarose (sc-377089 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377089 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377089 PE), fluorescein (sc-377089 FITC), Alexa Fluor® 488 (sc-377089 AF488), Alexa Fluor® 546 (sc-377089 AF546), Alexa Fluor® 594 (sc-377089 AF594) or Alexa Fluor® 647 (sc-377089 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-377089 AF680) or Alexa Fluor® 790 (sc-377089 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

## APPLICATIONS

UGP2 (B-3) is recommended for detection of UGP2 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), immunohistochemistry (including paraffin-embedded sections) (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 UGP2 siRNA (h): sc-94682, UGP2 siRNA (m): sc-154894, UGP2 shRNA Plasmid (h): sc-94682-SH, UGP2 shRNA Plasmid (m): sc-154894-SH, UGP2 shRNA (h) Lentiviral Particles: sc-94682-V and UGP2 shRNA (m) Lentiviral Particles: sc-154894-V.

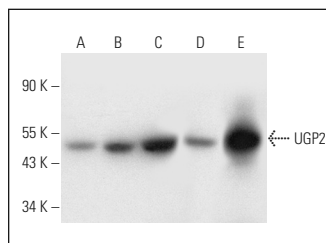
Molecular Weight of UGP2: 56 kDa.

Positive Controls: NCI-H460 whole cell lysate: sc-364235, NIH/3T3 whole cell lysate: sc-2210 or human liver extract: sc-363766.

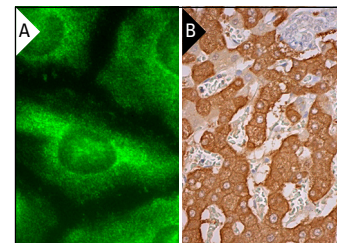
## RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



UGP2 (B-3): sc-377089. Western blot analysis of UGP2 expression in NCI-H460 (A), NCI-H1299 (B), A2058 (C) and NIH/3T3 (D) whole cell lysates and human liver tissue extract (E).



UGP2 (B-3): sc-377089. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing cytoplasmic and membrane staining of hepatocytes (B).

## SELECT PRODUCT CITATIONS

- Wolfe, A.L., et al. 2021. UDP-glucose pyrophosphorylase 2, a regulator of glycogen synthesis and glycosylation, is critical for pancreatic cancer growth. *Proc. Natl. Acad. Sci. USA* 118: e21103592118.
- Cho, J., et al. 2022. UDP-glucose: a cereblon-dependent glucokinase protein degrader. *Int. J. Mol. Sci.* 23: 9094.

## 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) for detailed protocols and support products.