

UGGT1 (K-16): sc-47561

BACKGROUND

UDP-glucose glycoprotein glucosyltransferase 1 (UGGT1 or HUGT1), belongs to the glycosyltransferase 8 family of proteins. UGGT1 is involved in glycosylation pathways and induced by tunicamycin and A23187. Its main function is to recognize glycoproteins with folding defects. It reglucosylates single N-glycans near the misfolded area, flagging these proteins for recycling to the endoplasmic reticulum (ER) followed by refolding or degradation. UGGT1, which localizes to the ER and to the ER-Golgi intermediate compartment, is primarily expressed in skeletal muscle, pancreas, brain and kidney tissues.

REFERENCES

1. Amouzadeh, H.R., Bourdi, M., Martin, J.L., Martin, B.M. and Pohl, L.R. 1997. UDP-glucose:glycoprotein glucosyltransferase associates with endoplasmic reticulum chaperones and its activity is decreased *in vivo* by the inhalation anesthetic halothane. *Chem. Res. Toxicol.* 10: 59-63.
2. Arnold, S.M., Fessler, L.I., Fessler, J.H. and Kaufman, R.J. 2000. Two homologues encoding human UDP-glucose:glycoprotein glucosyltransferase differ in mRNA expression and enzymatic activity. *Biochemistry* 39: 2149-2163.
3. Tessier, D.C., Dignard, D., Zapun, A., Radomska-Pandya, A., Parodi, A.J., Bergeron, J.J. and Thomas, D.Y. 2000. Cloning and characterization of mammalian UDP-glucose glycoprotein: glucosyltransferase and the development of a specific substrate for this enzyme. *Glycobiology* 10: 403-412.
4. Deigaard, S., Nicolay, J., Taheri, M., Thomas, D.Y. and Bergeron, J.J. 2003. The ER glycoprotein quality control system. *Curr. Issues Mol. Biol.* 6: 29-42.
5. Taylor, S.C., Thibault, P., Tessier, D.C., Bergeron, J.J. and Thomas, D.Y. 2003. Glycopeptide specificity of the secretory protein folding sensor UDP-glucose glycoprotein:glucosyltransferase. *EMBO Rep.* 4: 405-411.
6. Taylor, S.C., Ferguson, A.D., Bergeron, J.J. and Thomas, D.Y. 2004. The ER protein folding sensor UDP-glucose glycoprotein-glucosyltransferase modifies substrates distant to local changes in glycoprotein conformation. *Nat. Struct. Mol. Biol.* 11: 128-134.
7. Ito, Y., Hagihara, S., Matsuo, I. and Totani, K. 2005. Structural approaches to the st control. *Curr. Opin. Struct. Biol.* 15: 481-489.

CHROMOSOMAL LOCATION

Genetic locus: UGGT1 (human) mapping to 2q14.3; Ugt1 (mouse) mapping to 1 B.

SOURCE

UGGT1 (K-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of UGGT1 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-47561 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

UGGT1 (K-16) is recommended for detection of UGGT1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

UGGT1 (K-16) is also recommended for detection of UGGT1 in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for UGGT1 siRNA (h): sc-60098, UGGT1 siRNA (m): sc-60096, UGGT1 shRNA Plasmid (h): sc-60098-SH, UGGT1 shRNA Plasmid (m): sc-60096-SH, UGGT1 shRNA (h) Lentiviral Particles: sc-60098-V and UGGT1 shRNA (m) Lentiviral Particles: sc-60096-V.

Molecular Weight of UGGT1: 170 kDa.

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) 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.

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 or our catalog for detailed protocols and support products.


 MONOS
 Satisfaction
 Guaranteed

Try **UGGT1 (H-9): sc-374565**, our highly recommended monoclonal alternative to UGGT1 (K-16).