

# UGT8 (H-130): sc-292071

## BACKGROUND

UGT8 (UDP-galactose-ceramide galactosyltransferase, 2-hydroxyacylsphingosine 1- $\beta$ -galactosyltransferase) is a 541 amino acid, single pass membrane protein of the UDP-glycosyltransferase family. UGT8 is believed to be primarily involved with the metabolism of sphingolipids and galactosylceramide biosynthesis. UGT8 catalyzes the enzymatic transfer of galactose to ceramide in the reaction  $\text{UDP-galactose} + 2\text{-(2-hydroxyacyl)sphingosine} = \text{UDP} + 1\text{-(}\beta\text{-D-galactosyl)-2-(2-hydroxyacyl)sphingosine}$ . UGT8 is one of six genes whose elevated expression has been correlated with a significantly increased the risk of lung metastases in breast cancer patients. As such, UGT8 may be a significant index of tumor aggressiveness and a potential marker for the prognostic evaluation of lung metastases in breast cancer. UGT8 is ubiquitously expressed with highest levels found in central and peripheral nervous systems and is up-regulated in breast cancers.

## REFERENCES

1. Kapitonov, D. and Yu, R.K. 1997. Cloning, characterization, and expression of human ceramide galactosyltransferase cDNA. *Biochem. Biophys. Res. Commun.* 232: 449-453.
2. Gerhard, D.S., et al. 2004. The status, quality, and expansion of the NIH full-length cDNA project: the mammalian gene collection (MGC). *Genome Res.* 14: 2121-2127.
3. Tencomnao, T., et al. 2004. Transcriptional regulation of the human UDP-galactose:ceramide galactosyltransferase (hCGT) gene expression: functional role of GC-box and CRE. *Glycoconj. J.* 20: 339-351.
4. Ota, T., et al. 2004. Complete sequencing and characterization of 21,243 full-length human cDNAs. *Nat. Genet.* 36: 40-45.
5. Hillier, L.W., et al. 2005. Generation and annotation of the DNA sequences of human chromosomes 2 and 4. *Nature* 434: 724-731.
6. Mackenzie, P.I., et al. 2005. Nomenclature update for the mammalian UDP glycosyltransferase (UGT) gene superfamily. *Pharmacogenet. Genomics* 15: 677-685.
7. Ruckhäberle, E., et al. 2008. Microarray analysis of altered sphingolipid metabolism reveals prognostic significance of sphingosine kinase 1 in breast cancer. *Breast Cancer Res. Treat.* 112: 41-52.

## CHROMOSOMAL LOCATION

Genetic locus: UGT8 (human) mapping to 4q26; Ugt8a (mouse) mapping to 3 G1.

## SOURCE

UGT8 (H-130) is a rabbit polyclonal antibody raised against amino acids 122-251 mapping within an internal region of UGT8 of human origin.

## PRODUCT

Each vial contains 200  $\mu\text{g}$  IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

UGT8 (H-130) is recommended for detection of UGT8 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu\text{g}$  per 100-500  $\mu\text{g}$  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).

UGT8 (H-130) is also recommended for detection of UGT8 in additional species, including canine, bovine and avian.

Suitable for use as control antibody for UGT8 siRNA (h): sc-89005, UGT8 siRNA (m): sc-154908, UGT8 shRNA Plasmid (h): sc-89005-SH, UGT8 shRNA Plasmid (m): sc-154908-SH, UGT8 shRNA (h) Lentiviral Particles: sc-89005-V and UGT8 shRNA (m) Lentiviral Particles: sc-154908-V.

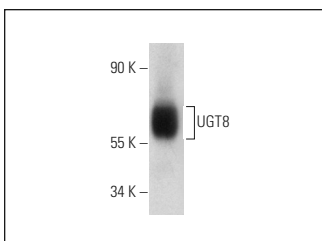
Molecular Weight of UGT8: 61 kDa.

Positive Controls: mouse colon extract: sc-364238.

## 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



UGT8 (H-130): sc-292071. Western blot analysis of UGT8 expression in mouse colon tissue extract.

## 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.