

GHITM (N-15)-R: sc-138015-R

BACKGROUND

GHITM (growth hormone inducible transmembrane protein), also known as DERP2 (dermal papilla-derived protein 2), TMBIM5 (transmembrane BAX inhibitor motif-containing protein 5), My021, MICS1 or PTD010, is a 345 amino acid multi-pass membrane protein belonging to the BI-1 (Bax inhibitor-1) family. Integral membrane proteins containing multiple membrane-spanning segments, members of the BI-1 are suggested to play a role in the regulation of cell death pathways and localize primarily to intracellular membranes. GHITM is involved in mitochondrial morphology and cytochrome c release, and is encoded by a gene located on human chromosome 10. Making up 4.5% of the human genome, chromosome 10 encodes roughly 800 genes including PTEN, a tumor suppressor gene that has been linked to the development of Cowden syndrome. The chromosome 10 encoded gene ERCC6 is important for DNA repair and is linked to Cockayne syndrome which is characterized by extreme photosensitivity and premature aging.

REFERENCES

1. Troelstra, C., et al. 1992. Localization of the nucleotide excision repair gene ERCC6 to human chromosome 10q11-q21. *Genomics* 12: 745-749.
2. Teresi, R.E., et al. 2007. Cowden syndrome-affected patients with PTEN promoter mutations demonstrate abnormal protein translation. *Am. J. Hum. Genet.* 81: 756-767.
3. Zhou, J., et al. 2008. Comparative genomics and function analysis on BI1 family. *Comput. Biol. Chem.* 32: 159-162.
4. Oka, T., et al. 2008. Identification of a novel protein MICS1 that is involved in maintenance of mitochondrial morphology and apoptotic release of cytochrome c. *Mol. Biol. Cell.* 19: 2597-2608.
5. Yin, Y. and Shen, W.H. 2008. PTEN: a new guardian of the genome. *Oncogene* 27: 5443-5453.

CHROMOSOMAL LOCATION

Genetic locus: GHITM (human) mapping to 10q23.1; Ghitm (mouse) mapping to 14 B.

SOURCE

GHITM (N-15)-R is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of GHITM 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-138015 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

GHITM (N-15)-R is recommended for detection of GHITM 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).

GHITM (N-15)-R is also recommended for detection of GHITM in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for GHITM siRNA (h): sc-90327, GHITM siRNA (m): sc-145395, GHITM shRNA Plasmid (h): sc-90327-SH, GHITM shRNA Plasmid (m): sc-145395-SH, GHITM shRNA (h) Lentiviral Particles: sc-90327-V and GHITM shRNA (m) Lentiviral Particles: sc-145395-V.

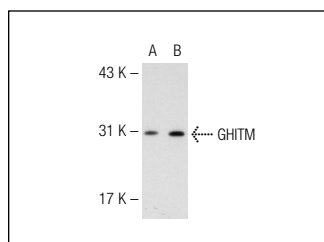
Molecular Weight of GHITM: 37 kDa.

Positive Controls: Ramos cell lysate: sc-2216 or NIH/3T3 whole cell lysate: sc-2210.

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



GHITM (N-15): sc-138015. Western blot analysis of GHITM expression in Ramos (A) and NIH/3T3 (B) whole cell lysates.

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.