

Maltase-glucoamylase (H-58): sc-98598

BACKGROUND

Maltase-glucoamylase, also known as MGAM, MG or MGA, is a 1,857 amino acid multi-pass membrane protein that localizes to the apical cell membrane and contains 2 P-type domains. Expressed in kidney, small intestine and granulocytes, Maltase-glucoamylase exists as a monomer that is thought to participate in an alternate pathway of starch digestion, specifically when luminal α -amylase activity is reduced because of immaturity or malnutrition. Maltase-glucoamylase is subject to posttranslational N- and O-glycosylation, as well as sulfation. The gene encoding Maltase-glucoamylase maps to human chromosome 7, which houses over 1,000 genes and comprises nearly 5% of the human genome. Defects in some of the genes localized to chromosome 7 have been linked to osteogenesis imperfecta, Williams-Beuren syndrome, Pendred syndrome, lissencephaly, citrullinemia and Shwachman-Diamond syndrome.

REFERENCES

1. Danielsen, E.M. 1987. Tyrosine sulfation, a post-translational modification of microvillar enzymes in the small intestinal enterocyte. *EMBO J.* 6: 2891-2896.
2. Naim, H.Y., et al. 1988. Structure, biosynthesis, and glycosylation of human small intestinal Maltase-glucoamylase. *J. Biol. Chem.* 263: 19709-19717.
3. Nichols, B.L., et al. 1998. Human small intestinal Maltase-glucoamylase cDNA cloning. Homology to Sucrase-Isomaltase. *J. Biol. Chem.* 273: 3076-3081.
4. Nichols, B.L., et al. 2003. The Maltase-glucoamylase gene: common ancestry to Sucrase-Isomaltase with complementary starch digestion activities. *Proc. Natl. Acad. Sci. USA* 100: 1432-1437.
5. Online Mendelian Inheritance in Man, OMIM™. 2003. Johns Hopkins University, Baltimore, MD. MIM Number: 154360. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: MGAM (human) mapping to 7q34; Mgam (mouse) mapping to 6 B1.

SOURCE

Maltase-glucoamylase (H-58) is a rabbit polyclonal antibody raised against amino acids 358-415 mapping within an internal region of Maltase-glucoamylase of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

Maltase-glucoamylase (H-58) is recommended for detection of Maltase-glucoamylase of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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). Maltase-glucoamylase (H-58) is also recommended for detection of Maltase-glucoamylase in additional species, including equine, canine and bovine.

Suitable for use as control antibody for Maltase-glucoamylase siRNA (h): sc-75740, Maltase-glucoamylase siRNA (m): sc-75741, Maltase-glucoamylase shRNA Plasmid (h): sc-75740-SH, Maltase-glucoamylase shRNA Plasmid (m): sc-75741-SH, Maltase-glucoamylase shRNA (h) Lentiviral Particles: sc-75740-V and Maltase-glucoamylase shRNA (m) Lentiviral Particles: sc-75741-V.

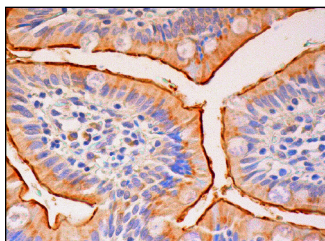
Molecular Weight of unglycosylated Maltase-glucoamylase: 210 kDa.

Molecular Weight of glycosylated Maltase-glucoamylase: 285/335 kDa.

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



Maltase-glucoamylase (H-58): sc-98598. Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing apical membrane and cytoplasmic staining of glandular cells.

RESEARCH USE

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