

MBOAT4 (D-14): sc-87999

BACKGROUND

MBOAT4 (membrane-bound O-acyltransferase domain-containing protein 4, ghrelin O-acyltransferase) is a 435 amino acid, multi-pass membrane protein that belongs to the membrane-bound acyltransferase family. MBOAT4 functions as an enzyme that attaches an octanoate fatty acid to Serine 3 of ghrelin. Ghrelin is a very small, appetite-stimulating hormone secreted by the food-deprived stomach. MBOAT4 can use a variety of fatty acids as substrates including octanoic acid, decanoic acid and tetradecanoic acid. MBOAT4 expression, consistent with its function, is mainly in the stomach and intestines. Due to its primary function, MBOAT4 is a candidate for obesity and appetite suppression studies.

REFERENCES

- Gardiner, J. and Bloom, S. 2008. Ghrelin gets its GOAT. *Cell Metab.* 7: 193-194.
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- González, C.R., Vázquez, M.J., López, M. and Diéguez, C. 2008. Influence of chronic undernutrition and leptin on GOAT mRNA levels in rat stomach mucosa. *J. Mol. Endocrinol.* 41: 415-421.
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- Yang, J., Zhao, T.J., Goldstein, J.L. and Brown, M.S. 2008. Inhibition of ghrelin O-acyltransferase (GOAT) by octanoylated pentapeptides. *Proc. Natl. Acad. Sci. USA* 105: 10750-10755.

CHROMOSOMAL LOCATION

Genetic locus: MBOAT4 (human) mapping to 8p12.

SOURCE

MBOAT4 (D-14) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of MBOAT4 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-87999 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

MBOAT4 (D-14) is recommended for detection of MBOAT4 of 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), 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); non cross-reactive with MBOAT1.

MBOAT4 (D-14) is also recommended for detection of MBOAT4 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for MBOAT4 siRNA (h): sc-77559, MBOAT4 shRNA Plasmid (h): sc-77559-SH and MBOAT4 shRNA (h) Lentiviral Particles: sc-77559-V.

Molecular Weight of MBOAT4: 50 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) 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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



MBOAT4 (D-14): sc-87999. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lower stomach tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

- Gurriaran-Rodriguez, U., Al-Massadi, O., Crujeiras, A.B., Mosteiro, C.S., Amil-Diz, M., Beiroa, D., Nogueiras, R., Seoane, L.M., Gallego, R., Pazos, Y., Casanueva, F.F. and Camina, J.P. 2011. Preproghrelin expression is a key target for Insulin action on adipogenesis. *J. Endocrinol.* 210: R1-R7.

RESEARCH USE

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