Monoglyceride Lipase (H-300): sc-134789

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BIOTECHNOLOGY

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BACKGROUND

Monoglyceride Lipase (MGL), also known as Lysophospholipase-like or Lysophospholipase homolog, is a ubiquitously expressed protein that functions in the endocannabinoid system. It is required for the the degradation of endocannabinoids and the complete hydrolysis of monoglycerides. In addition, Monoglyceride Lipase functions together with HSL (hormone-sensitive lipase) to hydrolyze intracellular triglyceride to glycerol and fatty acids. Monoglyceride Lipase is a presynaptic, cytosolic enzyme that functions as a serine hydrolase and specifically hydrolyzes 2- and 1(3)-ester bonds of monoglycerides. In particular, Monoglyceride Lipase is responsible for the inactivation and degradation of 2-arachidonoylglycerol (2-AG). 2-AG is a monoglyceride produced by neurons that activates cannabinoid receptors and possibly modulates neurotransmitter release and synaptic plasticity.

CHROMOSOMAL LOCATION

Genetic locus: MGLL (human) mapping to 3q21.3; Mgll (mouse) mapping to 6 D1.

SOURCE

Monoglyceride Lipase (H-300) is a rabbit polyclonal antibody raised against amino acids 1-300 representing full length Monoglyceride Lipase 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.

STORAGE

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

APPLICATIONS

Monoglyceride Lipase (H-300) is recommended for detection of Monoglyceride Lipase 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) 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).

Monoglyceride Lipase (H-300) is also recommended for detection of Monoglyceride Lipase in additional species, including canine and porcine.

Suitable for use as control antibody for Monoglyceride Lipase siRNA (h): sc-72277, Monoglyceride Lipase siRNA (m): sc-72278, Monoglyceride Lipase shRNA Plasmid (h): sc-72277-SH, Monoglyceride Lipase shRNA Plasmid (m): sc-72278-SH, Monoglyceride Lipase shRNA (h) Lentiviral Particles: sc-72277-V and Monoglyceride Lipase shRNA (m) Lentiviral Particles: sc-72278-V.

Molecular Weight of Monoglyceride Lipase: 33 kDa.

Positive Controls: Monoglyceride Lipase (m): 293T Lysate: sc-121714 or mouse brain extract: sc-2253.

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
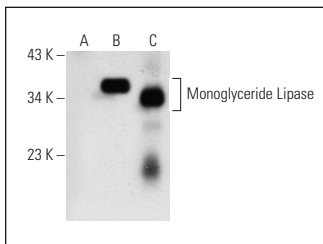
Monoglyceride Lipase (H-300): sc-134789. Western blot analysis of Monoglyceride Lipase expression in non-transfected: sc-117752 (**A**) and mouse Monoglyceride Lipase transfected: sc-121714 (**B**) 293T whole cell lysates and mouse brain tissue extract (**C**).
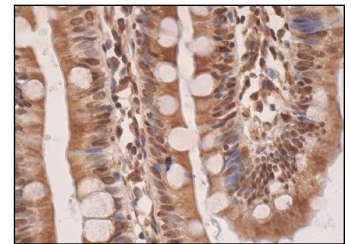
Monoglyceride Lipase (H-300): sc-134789. Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing cytoplasmic and nuclear staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Costa, M.A., et al. 2014. 2-Arachidonoylglycerol effects in cytotrophoblasts: metabolic enzymes expression and apoptosis in BeWo cells. Reproduction 147: 301-311.

2. Costa, M.A., et al. 2014. 2-Arachidonoylglycerol impairs human cytotrophoblast cells syncytialization: Influence of endocannabinoid signalling in placental development. Mol. Cell. Endocrinol. 399: 386-394.

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.

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Try **Monoglyceride Lipase (C-11): sc-398942**, our highly recommended monoclonal alternative to Monoglyceride Lipase (H-300).