

Monoglyceride Lipase (M-19): sc-54110

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 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.

REFERENCES

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3. Roy, R., et al. 2003. Assignment of monoglyceride lipase (MGLL) gene to bovine chromosome 22q24 by *in situ* hybridization and confirmation by radiation hybrid mapping. *Cytogenet. Genome Res.* 101: 92A.
4. Gulyas, A.I., et al. 2004. Segregation of two endocannabinoid-hydrolyzing enzymes into pre- and postsynaptic compartments in the rat hippocampus, cerebellum and amygdala. *Eur. J. Neurosci.* 20: 441-458.
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CHROMOSOMAL LOCATION

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

SOURCE

Monoglyceride Lipase (M-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Monoglyceride Lipase of mouse 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-54110 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Monoglyceride Lipase (M-19) is recommended for detection of Monoglyceride Lipase isoform 1 of mouse, rat and 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Monoglyceride Lipase (M-19) is also recommended for detection of Monoglyceride Lipase isoform 1 in additional species, including equine and canine.

Suitable for use as control antibody for Monoglyceride Lipase siRNA (h): sc-72277, Monoglyceride Lipase siRNA (m): sc-72278, Monoglyceride Lipase siRNA (r): sc-270312, Monoglyceride Lipase shRNA Plasmid (h): sc-72277-SH, Monoglyceride Lipase shRNA Plasmid (m): sc-72278-SH, Monoglyceride Lipase shRNA Plasmid (r): sc-270312-SH, Monoglyceride Lipase shRNA (h) Lentiviral Particles: sc-72277-V, Monoglyceride Lipase shRNA (m) Lentiviral Particles: sc-72278-V and Monoglyceride Lipase shRNA (r) Lentiviral Particles: sc-270312-V.

Molecular Weight of Monoglyceride Lipase: 33 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.



Try **Monoglyceride Lipase (C-11): sc-398942**, our highly recommended monoclonal alternative to Monoglyceride Lipase (M-19).