

DAGL β (Q-13): sc-133305

BACKGROUND

Members of the AB hydrolase superfamily have diverse catalytic functions and play a crucial role in the metabolism of lipids. DAGL β (diacylglycerol lipase beta), also known as KCCR13L, is a 672 amino acid multi-pass membrane protein that belongs to the AB hydrolase superfamily. DAGL β uses calcium as a cofactor to catalyze the hydrolysis of diacylglycerol (DAG) to 2-arachidonoyl-glycerol (2-AG), a reaction that is required for axonal growth and for retrograde synaptic signaling at mature synapses. DAGL β functions at an optimal pH of 7 and its activity is inhibited by p-hydroxy-mercuri-benzoate and HgCl₂, but not PMSF. There are three isoforms of DAGL β that are produced as a result of alternative splicing events.

REFERENCES

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2. Nakajima, D., et al. 2002. Construction of expression-ready cDNA clones for KIAA genes: manual curation of 330 KIAA cDNA clones. DNA Res. 9: 99-106.
3. Bisogno, T., et al. 2003. Cloning of the first sn1-DAG lipases points to the spatial and temporal regulation of endocannabinoid signaling in the brain. J. Cell Biol. 163: 463-468.
4. Ligresti, A., et al. 2005. Endocannabinoid metabolic pathways and enzymes. Curr. Drug Targets CNS Neurol. Disord. 4: 615-623.
5. Jung, K.M., et al. 2005. Stimulation of endocannabinoid formation in brain slice cultures through activation of group I metabotropic glutamate receptors. Mol. Pharmacol. 68: 1196-1202.
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CHROMOSOMAL LOCATION

Genetic locus: DAGLB (human) mapping to 7p22.1; Daglb (mouse) mapping to 5 G2.

SOURCE

DAGL β (Q-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of DAGL β 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.

Blocking peptide available for competition studies, sc-133305 P, (100 μ g 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

DAGL β (Q-13) is recommended for detection of DAGL β isoforms 1 and 2 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with DAGL β isoform 3.

DAGL β (Q-13) is also recommended for detection of DAGL β isoforms 1 and 2 in additional species, including canine.

Suitable for use as control antibody for DAGL β siRNA (h): sc-89591, DAGL β siRNA (m): sc-142867, DAGL β shRNA Plasmid (h): sc-89591-SH, DAGL β shRNA Plasmid (m): sc-142867-SH, DAGL β shRNA (h) Lentiviral Particles: sc-89591-V and DAGL β shRNA (m) Lentiviral Particles: sc-142867-V.

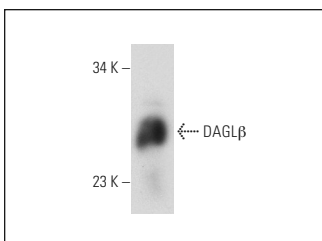
Molecular Weight of DAGL β : 74/43/29 kDa.

Positive Controls: mouse brain extract: sc-2253.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



DAGL β (Q-13): sc-133305. Western blot analysis of DAGL β expression in mouse brain tissue extract.

RESEARCH USE

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

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Try **DAGL β (A-5): sc-514738**, our highly recommended monoclonal alternative to DAGL β (Q-13).