SANTA CRUZ BIOTECHNOLOGY, INC.

DAGLα (E-6): sc-390409

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Members of the AB hydrolase superfamily have diverse catalytic functions and play a crucial role in the metabolism of lipids. DAGLα (diacylglycerol lipase α), also known as NSDDR or C11orf11, is a 1,042 amino acid multi-pass membrane protein that belongs to the AB hydrolase superfamily. Highly expressed in brain and pancreas, DAGLα 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. DAGLα functions as at optimal pH of seven and its activity is inhibited by p-hydroxy-mercuri-benzoate and $HgCl_2$. The gene encoding DAGLα maps to human chromosome 11, which houses over 1,400 genes and comprises nearly 4% of the human genome.

CHROMOSOMAL LOCATION

Genetic locus: DAGLA (human) mapping to 11q12.2; Dagla (mouse) mapping to 19 A.

SOURCE

DAGLα (E-6) is a mouse monoclonal antibody raised against amino acids 887-1042 mapping within a C-terminal cytoplasmic domain of DAGLα of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

DAGLα (E-6) is available conjugated to agarose (sc-390409 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-390409 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390409 PE), fluorescein (sc-390409 FITC), Alexa Fluor® 488 (sc-390409 AF488), Alexa Fluor® 546 (sc-390409 AF546), Alexa Fluor® 594 (sc-390409 AF594) or Alexa Fluor® 647 (sc-390409 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390409 AF680) or Alexa Fluor® 790 (sc-390409 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

DAGLα (E-6) is recommended for detection of DAGLα of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for DAGLα siRNA (h): sc-96964, DAGLα siRNA (m): sc-142868, DAGLα shRNA Plasmid (h): sc-96964-SH, DAGLα shRNA Plasmid (m): sc-142868-SH, DAGLα shRNA (h) Lentiviral Particles: sc-96964-V and DAGLα shRNA (m) Lentiviral Particles: sc-142868-V.

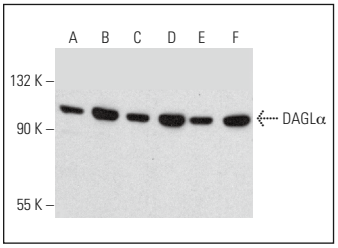
Molecular Weight of DAGLα: 120 kDa.

Positive Controls: NCI-H292 whole cell lysate: sc-364179, SK-N-MC cell lysate: sc-2237 or mouse brain extract: sc-2253.

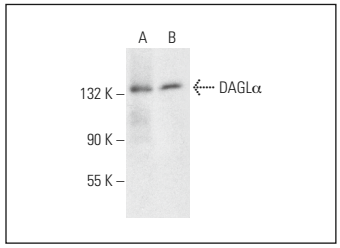
STORAGE

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

DATA



DAGLα (E-6): sc-390409. Western blot analysis of DAGLα expression in NCI-H292 (**A**), SK-N-MC (**B**), Sol8 (**C**), C2C12 (**D**), C6 (**E**) and L8 (**F**) whole cell lysates.



DAGLα (E-6): 390409. Western blot analysis of DAGLα expression in mouse brain (**A**) and human hippocampus (**B**) tissue extracts.

SELECT PRODUCT CITATIONS

1. Romano-López, A., et al. 2016. Maternal separation and early stress cause long-lasting effects on dopaminergic and endocannabinergic systems and alters dendritic morphology in the nucleus accumbens and frontal cortex in rats. Dev. Neurobiol. 76: 819-831.
2. Gandhi, K., et al. 2017. Effect of maternal high-fat diet on key components of the placental and hepatic endocannabinoid system. Am. J. Physiol. Endocrinol. Metab. 314: E322-E333.
3. Aguirre, E.C., et al. 2019. The endocannabinoid system is present in rod outer segments from retina and is modulated by light. Mol. Neurobiol. 56: 7284-7295.
4. Palma-Chavez, A., et al. 2019. Glucose increase DAGLα levels in tanycytes and its inhibition alters orexigenic and anorexigenic neuropeptides expression in response to glucose. Front. Endocrinol. 10: 647.
5. Angyal, Á., et al. 2021. Anandamide concentration-dependently modulates Toll-like receptor 3 agonism or UVB-induced inflammatory response of human corneal epithelial cells. Int. J. Mol. Sci. 22: 7776.
6. Metz, V.G., et al. 2022. Cannabidiol treatment prevents drug reinstatement and the molecular alterations evoked by amphetamine on receptors and enzymes from dopaminergic and endocannabinoid systems in rats. Pharmacol. Biochem. Behav. 218: 173427.
7. Dias-Rocha, C.P., et al. 2022. Maternal high-fat diet alters thermogenic markers but not muscle or brown adipose cannabinoid receptors in adult rats. Life Sci. 306: 120831.
8. Scipioni, L., et al. 2023. Aβ chronic exposure promotes an activation state of microglia through endocannabinoid signalling imbalance. Int. J. Mol. Sci. 24: 6684.

RESEARCH USE

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