SANTA CRUZ BIOTECHNOLOGY, INC.

GPR17 (A-10): sc-514723

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

G protein-coupled receptor 17, GPR17, also known as uracil nucleotide/cysteinyl leukotriene receptor or P2Y-like receptor (P2YL), is a 367 amino acid member of the G protein-coupled receptor 1 family of proteins. While GPR17 is expressed in kidney, heart and umbilical vein endothelial cells, it is expressed in the highest levels in the brain. Upon brain injury, the extracellular concentrations of nucleotides and cysteinyl leukotrienes (CysLTs), two families of endogenous signaling molecules, increase significantly at the site of damage. In some neurons, GPR17, a membrane receptor for uracil nucleotide and CysLTs, is upregulated as well, infiltrating the lesioned area. GPR17 is thought to play a role in mediating neuronal death, remodeling brain circuitries by microglia and initiating remyelination in damaged neurons. Two named isoforms of GPR17 exist as a result of alternative splicing events.

CHROMOSOMAL LOCATION

Genetic locus: GPR17 (human) mapping to 2q14.3; Gpr17 (mouse) mapping to 18 B1.

SOURCE

GPR17 (A-10) is a mouse monoclonal antibody raised against amino acids 278-367 mapping at the C-terminus of GPR17 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.

GPR17 (A-10) is available conjugated to agarose (sc-514723 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-514723 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514723 PE), fluorescein (sc-514723 FITC), Alexa Fluor® 488 (sc-514723 AF488), Alexa Fluor® 546 (sc-514723 AF546), Alexa Fluor® 594 (sc-514723 AF594) or Alexa Fluor® 647 (sc-514723 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514723 AF680) or Alexa Fluor® 790 (sc-514723 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

GPR17 (A-10) is recommended for detection of GPR17 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 GPR17 siRNA (h): sc-76030, GPR17 siRNA (m): sc-76031, GPR17 shRNA Plasmid (h): sc-76030-SH, GPR17 shRNA Plasmid (m): sc-76031-SH, GPR17 shRNA (h) Lentiviral Particles: sc-76030-V and GPR17 shRNA (m) Lentiviral Particles: sc-76031-V.

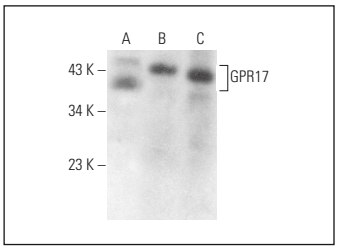
Molecular Weight of GPR17: 38-41 kDa.

Positive Controls: SK-N-SH cell lysate: sc-2410, mouse brain extract: sc-2253 or rat brain extract: sc-2392.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



GPR17 (A-10): sc-514723. Western blot analysis of GPR17 expression in SK-N-SH whole cell lysate (**A**) and mouse brain (**B**) and rat brain (**C**) tissue extracts.

SELECT PRODUCT CITATIONS

1. Zhan, T.W., et al. 2018. Cangrelor alleviates pulmonary fibrosis by inhibiting GPR17-mediated inflammation in mice. Int. Immunopharmacol. 62: 261-269.
2. Doan, P., et al. 2021. Targeting orphan G protein-coupled receptor 17 with T0 ligand impairs glioblastoma growth. Cancers 13: 3773.
3. Huang, H., et al. 2023. The N^6-methyladenosine RNA landscape in the aged mouse hippocampus. Aging Cell 22: e13755.
4. He, L., et al. 2023. A novel CCK receptor GPR173 mediates potentiation of GABAergic inhibition. J. Neurosci. 43: 2305-2325.

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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.