SANTA CRUZ BIOTECHNOLOGY, INC.

GPR157 (G-5): sc-398916

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

G protein-coupled receptors (GPRs), also known as seven transmembrane receptors, heptahelical receptors or 7TM receptors, comprise a superfamily of proteins that play a role in many different stimulus-response pathways. G protein-coupled receptors translate extracellular signals into intracellular signals (G protein activation) and they respond to a variety of signaling molecules, such as hormones and neurotransmitters. GPR157 is a 335 amino acid multi-pass membrane protein that functions as an orphan receptor and belongs to the GPR2 family. The gene encoding GPR157 maps to human chromosome 1p36.23. Chromosome 1 spans 260 million base pairs, contains over 3,000 genes, comprises nearly 8% of the human genome and houses a large number of disease-associated genes, including those that are involved in familial adenomatous polyposis, Stickler syndrome, Parkinson's disease, Gaucher disease, schizophrenia and Usher syndrome.

REFERENCES

1. Lau, E.K., et al. 1999. Two novel polymorphic sequences in the glucocerebrosidase gene region enhance mutational screening and founder effect studies of patients with Gaucher disease. Hum. Genet. 104: 293-300.
2. Menzaghi, F., et al. 2002. Constitutively activated G protein-coupled receptors: a novel approach to CNS drug discovery. Curr. Drug Targets CNS Neurol. Disord. 1: 105-121.
3. Szekeres, P.G. 2002. Functional assays for identifying ligands at orphan G protein-coupled receptors. Recept. Channels 8: 297-308.

CHROMOSOMAL LOCATION

Genetic locus: GPR157 (human) mapping to 1p36.23; Gpr157 (mouse) mapping to 4 E2.

SOURCE

GPR157 (G-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 197-220 within a cytoplasmic domain of GPR157 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.

GPR157 (G-5) is available conjugated to agarose (sc-398916 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-398916 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398916 PE), fluorescein (sc-398916 FITC), Alexa Fluor® 488 (sc-398916 AF488), Alexa Fluor® 546 (sc-398916 AF546), Alexa Fluor® 594 (sc-398916 AF594) or Alexa Fluor® 647 (sc-398916 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398916 AF680) or Alexa Fluor® 790 (sc-398916 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398916 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

GPR157 (G-5) is recommended for detection of GPR157 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 GPR157 siRNA (h): sc-88252, GPR157 siRNA (m): sc-145714, GPR157 shRNA Plasmid (h): sc-88252-SH, GPR157 shRNA Plasmid (m): sc-145714-SH, GPR157 shRNA (h) Lentiviral Particles: sc-88252-V and GPR157 shRNA (m) Lentiviral Particles: sc-145714-V.

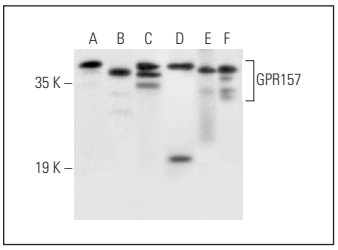
Molecular Weight of GPR157: 37 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, JAR cell lysate: sc-2276 or JEG-3 whole cell lysate: sc-364255.

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



GPR157 (G-5): sc-398916. Western blot analysis of GPR157 expression in MCF7 (**A**), RAW 264.7 (**B**), JAR (**C**) and JEG-3 (**D**) whole cell lysates and mouse spleen (**E**) and human spleen (**F**) tissue extracts.

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.