BACKGROUND

The members of the G protein-coupled receptor family are distinguished by their slow transmitting response to ligand binding. These transmembrane proteins include the adrenergic, serotonin and dopamine receptors. The effect of the signaling molecule can be excitatory or inhibitory depending on the type of receptor to which it binds. β-adrenergic receptor binds to adrenaline activates adenylyl cyclase, while α₂-adrenergic receptor binds to adrenaline inhibits adenylyl cyclase. The dopamine receptors are divided into two classes, D1 and D2, which differ in their functional characteristics in that D1 receptors stimulate adenylyl cyclase while D2 receptors inhibit adenylyl cyclase activity. Five different subtypes of dopamine receptor have been described to date. D1DR and D5DR belong to the D1 subclass, while D2DR, D3DR and D4DR belong to the D2 subclass.

CHROMOSOMAL LOCATION

Genetic locus: DRD1 (human) mapping to 5q35.2; Drd1a (mouse) mapping to 13 B1.

SOURCE

D1DR (SG2-D1a) is a mouse monoclonal antibody raised against the last 123 C-terminal amino acids of D1DR of rat origin.

PRODUCT

Each vial contains 200 μg IgG₂b kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

D1DR (SG2-D1a) is available conjugated to agarose (sc-33660 AC), 500 μg/0.25 ml agarose in 1 ml, for WB, IHCP and ELISA; to either phycoerythrin (sc-33660 PE), fluorescein (sc-33660 FITC), Alexa Fluor® 488 (sc-33660 AF488), Alexa Fluor® 594 (sc-33660 AF594) or Alexa Fluor® 647 (sc-33660 AF647), 200 μg/ml, for IF, IHCP and FCM; and to either Alexa Fluor® 680 (sc-33660 AF680) or Alexa Fluor® 790 (sc-33660 AF790), 200 μg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

D1DR (SG2-D1a) is recommended for detection of D1DR of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μg per 100-500 μg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for D1DR siRNA (h): sc-35159, D1DR siRNA (m): sc-35160, D1DR shRNA Plasmid (h): sc-35159-SH, D1DR shRNA Plasmid (m): sc-35160-SH, D1DR shRNA (h) Lentiviral Particles: sc-35159-V and D1DR shRNA (m) Lentiviral Particles: sc-35160-V.

Molecular Weight of D1DR: 74 kDa.

Positive Controls: mouse brain extract: sc-2253, KNRK whole cell lysate: sc-2214 or rat brain extract: sc-2392.

RESEARCH USE

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

STORAGE

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

DATA

D1DR (SG2-D1a) HRP: sc-33660 HRP. Direct western blot analysis of D1DR expression in mouse brain (A) and rat brain (B) tissue extracts.

SELECT PRODUCT CITATIONS


PROTOCOLS

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

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