SANTA CRUZ BIOTECHNOLOGY, INC.

D3DR (R-15): sc-33922

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 bound to adrenaline activates adenylyl cyclase, while α_2-adrenergic receptor bound 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.

REFERENCES

1. Hausdorff, W.P., et al. 1990. Two kinases mediate agonist-dependent phosphorylation and desensitization of the β_2-adrenergic receptor. Symp. Soc. Exper. Biol. 44: 225-240.
2. Cotecchia, S., et al. 1990. Multiple second messenger pathways of α-adrenergic receptor subtypes expressed in eukaryotic cells. J. Biol. Chem. 265: 63-69.
3. Hayes, G., et al. 1992. Structural subtypes of the dopamine D2 receptor are functionally distinct: expression of the cloned D2A and D2B subtypes in a heterologous cell line. Mol. Endocrinol. 6: 920-926.
4. Senogles, S.E. 1994. The D2 dopamine receptor isoforms signal through distinct $G_{i\,\alpha}$ proteins to inhibit adenylyl cyclase. A study with site-directed mutant $G_{i\,\alpha}$ proteins. J. Biol. Chem. 269: 23120-23127.
5. Barak, L.S., et al. 1995. The conserved seven-transmembrane sequence NP(X)2,3Y of the G protein-coupled receptor superfamily regulates multiple properties of the β_2-adrenergic receptor. Biochemistry 34: 15407-15414.
6. Ogawa, N. 1995. Molecular and chemical neuropharmacology of dopamine receptor subtypes. Acta Med. Okayama 49: 1-11.

CHROMOSOMAL LOCATION

Genetic locus: DRD3 (human) mapping to 3q13.3; Drd3 (mouse) mapping to 16 B4.

SOURCE

D3DR (R-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of D3DR of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-33922 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

D3DR (R-15) is recommended for detection of D3DR of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 D3DR siRNA (h): sc-35163, D3DR siRNA (m): sc-35164, D3DR shRNA Plasmid (h): sc-35163-SH, D3DR shRNA Plasmid (m): sc-35164-SH, D3DR shRNA (h) Lentiviral Particles: sc-35163-V and D3DR shRNA (m) Lentiviral Particles: sc-35164-V.

Molecular Weight of D3DR: 44 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) 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.

STORAGE

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

PROTOCOLS

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