



DP (C-15): sc-55812

BACKGROUND

DP (prostanoid DP receptor or prostaglandin D2 receptor), also known as AS1 or ASRT1, is a member of the G protein-coupled receptor 1 family. It localizes to the cell membrane and is widely expressed, found in cells and tissues such as lung, platelets, nasal mucosa, small intestine and retina. DP functions as one of the two receptors for prostaglandin D2 (the other being CRTH2). Responses mediated by DP include mucin secretion, vasorelaxation via synthesis of intracellular cAMP, inhibition of platelet aggregation and the lowering of intraocular pressure. DP also plays an important role in eosinophil trafficking and may serve as a target protein in the treatment of allergic disease. Variations in the gene encoding DP are implicated in the susceptibility to asthma-related traits including symptoms such as wheezing, coughing and dyspnea.

REFERENCES

- Moreland, R.B., et al. 2002. Expression of functional prostaglandin D (DP) receptors in human corpus cavernosum smooth muscle. *Int. J. Impot. Res.* 14: 446-452.
- Liang, X., et al. 2005. Prostaglandin D2 mediates neuronal protection via the DP1 receptor. *J. Neurochem.* 92: 477-486.
- Shiraishi, Y., et al. 2005. Prostaglandin D2-induced eosinophilic airway inflammation is mediated by CRTH2 receptor. *J. Pharmacol. Exp. Ther.* 312: 954-960.
- Qu, W.M., et al. 2006. Lipocalin-type prostaglandin D synthase produces prostaglandin D2 involved in regulation of physiological sleep. *Proc. Natl. Acad. Sci. USA* 103: 17949-17954.
- Kostenis, E. and Ulven, T. 2006. Emerging roles of DP and CRTH2 in allergic inflammation. *Trends Mol. Med.* 12: 148-158.
- Sturino, C.F., et al. 2006. Identification of an indole series of prostaglandin D2 receptor antagonists. *Bioorg. Med. Chem. Lett.* 16: 3043-3048.
- Mathiesen, J.M., et al. 2006. On the mechanism of interaction of potent surmountable and insurmountable antagonists with the prostaglandin D2 receptor CRTH2. *Mol. Pharmacol.* 69: 1441-1453.
- Schratl, P., et al. 2007. The role of the prostaglandin D2 receptor, DP, in eosinophil trafficking. *J. Immunol.* 179: 4792-4799.
- Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 604687. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: PTGDR (human) mapping to 14q22.1.

SOURCE

DP (C-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of DP of human origin.

RESEARCH USE

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

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-55812 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

DP (C-15) is recommended for detection of DP of 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 DP siRNA (h): sc-62226.

Molecular Weight of DP: 43 kDa.

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.