

IP Receptor (M-20): sc-20438

BACKGROUND

Cyclooxygenases metabolize arachidonate to five primary prostanoids: PGE₂, PGF₂α, PGI₂, TXA₂ and PGD₂. These lipid mediators interact with specific members of G protein-coupled prostanoid receptors, designated EP, FP, IP, TP and DP, respectively. The IP Receptor binds prostacyclin, PGI₂, the main prostanoid synthesized by vascular tissues. First discovered in 1976, prostacyclin is involved in platelet aggregation inhibition, vasodilatation and cytoprotection, and either prostacyclin or its analogs are used in the treatment of hypertension. Upon binding to the IP Receptor, prostacyclin activates adenylate cyclase primarily through the Gas protein. The gene encoding the human IP Receptor is located on chromosome 19. It is expressed as a glycosylated and phosphorylated protein, which is abundantly expressed in vascular tissues such as aorta, lung, atrium and ventricle, as well as in kidney, thymus, spleen and neurons.

REFERENCES

1. Botting, R., et al. 1989. Vasoactive mediators derived from the endothelium. *Arch. Mal. Coeur Vaiss.* 82: 11-14.
2. Grant, S.M., et al. 1992. Iloprost. A review of its pharmacodynamic and pharmacokinetic properties, and therapeutic potential in peripheral vascular disease, myocardial ischaemia and extracorporeal circulation procedures. *Drugs* 43: 889-924.
3. Nakagawa, O., et al. 1994. Molecular cloning of human prostacyclin receptor cDNA and its gene expression in the cardiovascular system. *Circulation* 90: 1643-1647.
4. Vane, J.R., et al. 1995. Pharmacodynamic profile of prostacyclin. *Am. J. Cardiol.* 75: 3-10.
5. Ogawa, Y., et al. 1995. Structural organization and chromosomal assignment of the human prostacyclin receptor gene. *Genomics* 27: 142-148.
6. Oida, H., et al. 1995. *In situ* hybridization studies of prostacyclin receptor mRNA expression in various mouse organs. *Br. J. Pharmacol.* 116: 2828-2837.

CHROMOSOMAL LOCATION

Genetic locus: Ptgir (mouse) mapping to 7 A2.

SOURCE

IP Receptor (M-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of IP Receptor of mouse 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-20438 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

IP Receptor (M-20) is recommended for detection of IP Receptor of mouse and rat 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)], 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 IP Receptor siRNA (m): sc-40176, IP Receptor shRNA Plasmid (m): sc-40176-SH and IP Receptor shRNA (m) Lentiviral Particles: sc-40176-V.

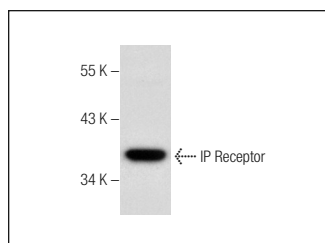
Molecular Weight of IP Receptor: 42 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210 or mouse heart extract: sc-2254.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



IP Receptor (M-20): sc-20438. Western blot analysis of IP Receptor expression in NIH/3T3 whole cell lysate.

STORAGE

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

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Try **IP Receptor (B-6): sc-515139**, our highly recommended monoclonal alternative to IP Receptor (M-20).