

# Product Information



## IP Receptor (human) Polyclonal Antibody

Catalog No. 10005518

<b>Synonyms:</b>	PGI <sub>2</sub> Receptor; Prostacyclin Receptor; Prostaglandin I <sub>2</sub> Receptor
<b>Contents:</b>	This vial contains 100 µg of affinity-purified IgG in 200 µl TBS, pH 7.4, containing 50% glycerol, 0.1% BSA, and 0.02% sodium azide
<b>Host:</b>	Rabbit
<b>Antigen:</b>	Human IP receptor N-terminal amino acids 1-16 (MADSCRNLTYVRGSVG). Homology of peptide antigen with the IP receptor from other species is as follows: Human MADSCRNLTYVRGSVG Bovine MADSCRNLTYVR d SVG Murine and rat MA g SCwN iTYV q d SVG
<b>Cross-reactivity:</b>	(+) Human, murine, and rat IP receptor; other species not tested but expected to detect bovine IP receptor
<b>Stability:</b>	≥1 year at -20°C
<b>Application:</b>	Western blotting at 1 µg/ml (1:500) is the recommended starting dilution. Other applications have not been tested, therefore optimal working dilutions should be empirically determined

Prostaglandin I<sub>2</sub> (PGI<sub>2</sub>) is a potent vasorelaxant and inhibitor of human platelet aggregation.<sup>1</sup> The PGI<sub>2</sub> receptor (IP receptor) also participates in signal transduction of the pain response, cardioprotection, and inflammation.<sup>2-6</sup> Cloning of the murine and human IP receptors revealed a significant amino-terminal truncation of the human IP receptor compared to the murine receptor.<sup>7,8</sup> Cayman Chemical's IP receptor antibody detects a 67 kDa band on immunoblot. The predicted migration of the deglycosylated protein is 40 kDa and bands at either 67 or 40 kDa may be detected depending on the degree of post-translational modification of the sample.<sup>9</sup>

### References

1. Aristoff, P.A., Johnson, P.D., and Harrison, A.W. Synthesis of 9-substituted carbacyclin analogues. *J. Org. Chem.* **48**, 5341-5348 (1983).
2. Southall, M.D. and Vasko, M.R. Prostaglandin receptor subtypes, EP<sub>3</sub>C and EP<sub>4</sub>, mediate the prostaglandin E<sub>2</sub>-induced cAMP production and sensitization of sensory neurons. *J. Biol. Chem.* **276(19)**, 16083-16091 (2001).
3. Murata, T., Ushikubi, F., Matsuoka, T., *et al.* Altered pain perception and inflammatory response in mice lacking prostacyclin receptor. *Nature* **388**, 678-682 (1997).
4. Cheng, Y., Austin, S.C., Rocca, B., *et al.* Role of prostacyclin in the cardiovascular response to thromboxane A<sub>2</sub>. *Science* **296**, 539-541 (2002).
5. Cui, Y., Kataoka, Y., Satoh, T., *et al.* Protective effect of prostaglandin I<sub>2</sub> analogs on ischemic delayed neuronal damage in gerbils. *Biochem. Biophys. Res. Commun.* **265**, 301-304 (1999).
6. McLaughlin, V.V., Genthner, D.E., Panella, M.M., *et al.* Reduction in pulmonary vascular resistance with long-term epoprostenol (prostacyclin) therapy in primary pulmonary hypertension. *N. Engl. J. Med.* **338**, 273-277 (1998).
7. Nakagawa, O., Tanaka, I., Usui, T., *et al.* Molecular cloning of human prostacyclin receptor cDNA and its gene expression in the cardiovascular system. *Circulation* **90**, 1643-1647 (1994).
8. Namba, T., Oida, H., Sugimoto, Y., *et al.* cDNA cloning of a mouse prostacyclin receptor. Multiple signaling pathways and expression in thymic medulla. *J. Biol. Chem.* **269**, 9986-9992 (1994).
9. Smyth, E.M., Nestor, P.V., and Fitzgerald, G.A. Agonist-dependent phosphorylation of an epitope-tagged human prostacyclin receptor. *J. Biol. Chem.* **271(52)**, 33698-33704 (1996).

### Related Products

15(R)-Iloprost - 10043 • 6 $\alpha$ -Prostaglandin I<sub>1</sub> - Cat. No. 18110 • 6 $\beta$ -Prostaglandin I<sub>1</sub> - Cat. No. 18120 • Carbaprostacyclin - Cat. No. 18210 • 5-*cis* Carbaprostacyclin - Cat. No. 18211 • 13,14-dehydro-15-cyclohexyl Carbaprostacyclin - Cat. No. 18212 • Carbaprostacyclin-biotinimide - Cat. No. 18213 • Iloprost - Cat. No. 18215 • Ciprostone (calcium salt) - Cat. No. 18216 • Prostaglandin I<sub>2</sub> (sodium salt) - Cat. No. 18220 • Beraprost (sodium salt) - Cat. No. 18230 • Prostaglandin I Synthase Monoclonal Antibody - Cat. No. 160630 • Prostaglandin I Synthase Polyclonal Antibody - Cat. No. 160640 • Prostacyclin Receptor (human) cDNA Probe - Cat. No. 660075 • IP Receptor (human) Blocking Peptide - Cat. No. 10005519

**WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**

### MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent via email to your institution.

### WARRANTY AND LIMITATION OF REMEDY

Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman warrants only to the original customer that the material will meet our specifications at the time of delivery.

Cayman will carry out its delivery obligations with due care and skill. Thus, in no event will Cayman have any **obligation or liability**, whether in tort (including negligence) or in contract, for any direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence.

This limitation of liability does not apply in the case of intentional acts or negligence of Cayman, its directors or its employees.

Buyer's **exclusive remedy** and Cayman's sole liability hereunder shall be limited to a **refund** of the purchase price, or at Cayman's option, the **replacement**, at no cost to Buyer, of all material that does not meet our specifications.

Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver by Buyer of all claims hereunder with respect to said material.

For further details, please refer to our **Warranty and Limitation of Remedy** located on our website and in our catalog.

Copyright Cayman Chemical Company, 02/05/2010

### Cayman Chemical

#### Mailing address

1180 E. Ellsworth Road  
Ann Arbor, MI  
48108 USA

#### Phone

(800) 364-9897  
(734) 971-3335

#### Fax

(734) 971-3640

#### E-Mail

custserv@caymanchem.com

#### Web

www.caymanchem.com