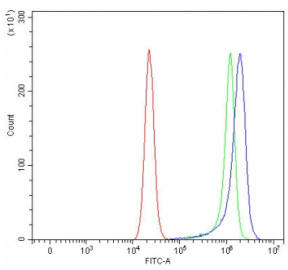
Prostaglandin reductase 1 Antibody / PTGR1 (RQ8381)

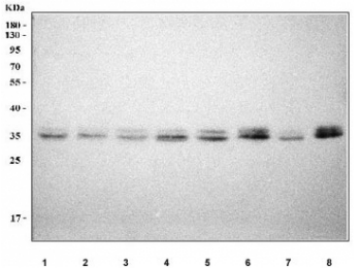
Catalog No.	Formulation	Size
RQ8381	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q14914
Applications	Western blot: 0.5-1ug/ml Flow cytometry: 1-3ug/million cells Direct ELISA: 0.1-0.5ug/ml
Limitations	This Prostaglandin reductase 1 antibody is available for research use only.



Prostaglandin Reductase 1 Antibody RT4 Cell FACS. Flow cytometry analysis of fixed and permeabilized human RT4 cells using Prostaglandin Reductase 1 Antibody demonstrates a clear rightward shift of the positive cell population (blue) relative to the isotype control (green), consistent with intracellular expression of PTGR1. Prostaglandin Reductase 1 is a NADP-dependent oxidoreductase involved in prostaglandin and leukotriene metabolism, helping regulate eicosanoid signaling pathways associated with inflammation and lipid mediator turnover. Cells were blocked with goat serum prior to staining. Red=cells alone; Green=isotype control; Blue=Prostaglandin Reductase 1 antibody.



Prostaglandin Reductase 1 Antibody Western Blot. Western blot analysis of human HeLa (lane 1), HepG2 (lane 2), A549 (lane 3), RT4 (lane 4), SiHa (lane 5), HaCaT (lane 6), Caco-2 (lane 7), and PC-3 (lane 8) cell lysates using Prostaglandin Reductase 1 Antibody demonstrates bands at approximately 33-36 kDa, consistent with the predicted molecular weights of the two known PTGR1 isoforms. PTGR1 is a NADP-dependent oxidoreductase involved in prostaglandin and leukotriene metabolism, contributing to the regulation of eicosanoid signaling pathways associated with inflammation, oxidative stress responses, and lipid mediator turnover. Detection of the expected molecular weight bands across multiple human cell lines supports expression of PTGR1 and the suitability of this antibody for western blot applications.

Description

Prostaglandin Reductase 1 antibody is designed for the detection and characterization of Prostaglandin Reductase 1, an NADP-dependent oxidoreductase encoded by the PTGR1 gene. This enzyme participates in the metabolism of prostaglandins, leukotrienes, and other biologically active lipid mediators that regulate inflammation, immune responses, vascular function, and tissue homeostasis. Through its role in eicosanoid catabolism, Prostaglandin Reductase 1 helps control the intensity and duration of lipid-mediated cellular signaling.

Prostaglandins and leukotrienes are important signaling molecules that influence numerous physiologic and pathologic processes. Their production and degradation are tightly regulated to ensure appropriate inflammatory and homeostatic responses. Prostaglandin Reductase 1 contributes to this balance by metabolizing specific lipid mediators and reducing their biologic activity. This function supports normal resolution of inflammatory responses and helps maintain proper signaling within tissues exposed to injury, infection, or environmental stress.

In addition to its role in prostaglandin metabolism, PTGR1 is widely recognized for its activity toward leukotriene B4, a potent inflammatory mediator involved in leukocyte recruitment and immune regulation. Because of this function, PTGR1 occupies an important position within interconnected prostaglandin and leukotriene signaling pathways. Investigators frequently study PTGR1 when examining mechanisms of inflammation, oxidative stress, tumor biology, and metabolic regulation.

Dysregulation of eicosanoid metabolism has been associated with chronic inflammatory diseases, cardiovascular disorders, and multiple forms of cancer. Consequently, Prostaglandin Reductase 1 has attracted attention as a potential biomarker and regulatory factor within pathways linking lipid metabolism to disease progression. Characterization of PTGR1 expression can provide valuable insight into how tissues regulate bioactive lipid signaling under both normal and disease-associated conditions.

Prostaglandin Reductase 1 antibodies are commonly utilized in western blotting, immunohistochemistry, immunofluorescence, flow cytometry, and other protein analysis applications. These antibodies support studies investigating prostaglandin metabolism, leukotriene signaling, inflammatory regulation, and cancer-associated metabolic pathways. Researchers use Prostaglandin Reductase 1 antibody reagents to evaluate protein expression and explore the biologic significance of PTGR1 within eicosanoid signaling networks.

Learn more about PTGR1 expression, biologic function, and available research reagents on our PTGR1 Antibody page.

Application Notes

Optimal dilution of the Prostaglandin reductase 1 antibody should be determined by the researcher.

Immunogen

An E.coli-derived human recombinant protein (T8-A329) was used as the immunogen for the Prostaglandin reductase 1 antibody.

Storage

After reconstitution, the Prostaglandin reductase 1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

PTGR1 Antibody, Leukotriene B4 12-Hydroxydehydrogenase Antibody, LTB4DH Antibody, LTB4 12-HD Antibody, Eicosanoid Metabolism Enzyme Antibody, Lipid Signaling Regulatory Protein Antibody

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