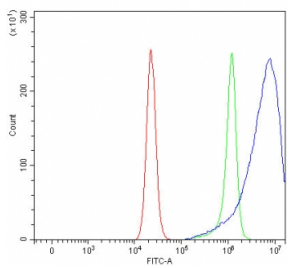
Prostaglandin reductase 2 Antibody / PTGR2 (RQ8397)

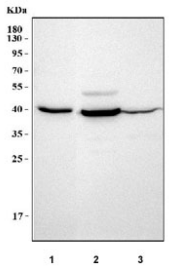
Catalog No.	Formulation	Size
RQ8397	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

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	Q8N8N7
Applications	Western Blot : 0.5-1ug/ml Flow Cytometry : 1-3ug/million cells Direct ELISA : 0.1-0.5ug/ml
Limitations	This Prostaglandin reductase 2 antibody is available for research use only.



Prostaglandin Reductase 2 Antibody RT4 Cell FACS. Flow cytometry analysis of fixed and permeabilized human RT4 cells using Prostaglandin Reductase 2 Antibody demonstrates a clear rightward shift of the positive cell population (blue) relative to the isotype control (green), consistent with intracellular expression of PTGR2. PTGR2 is a cytoplasmic oxidoreductase involved in prostaglandin metabolism and eicosanoid signaling regulation. Cells were blocked with goat serum prior to staining. Red=cells alone; Green=isotype control; Blue=Prostaglandin Reductase 2 antibody.



Prostaglandin Reductase 2 Antibody Western Blot. Western blot analysis of human MCF7 (lane 1), RT4 (lane 2), and Caco-2 (lane 3) cell lysates using Prostaglandin Reductase 2 Antibody demonstrates a distinct band at approximately 38-40 kDa, consistent with the predicted molecular weight of PTGR2. Prostaglandin Reductase 2 is an NADPH-dependent oxidoreductase involved in prostaglandin metabolism and the regulation of eicosanoid signaling pathways. Detection of the expected molecular weight band across multiple human cell lines supports expression of PTGR2 and the utility of this antibody for western blot applications.

Description

Prostaglandin Reductase 2 antibody is designed for the detection and characterization of Prostaglandin Reductase 2, an NADPH-dependent oxidoreductase encoded by the PTGR2 gene. This enzyme participates in the metabolism of prostaglandins and related lipid mediators that regulate inflammation, cellular communication, vascular function, and tissue homeostasis. By catalyzing the reduction of prostaglandin intermediates, Prostaglandin Reductase 2 contributes to the controlled turnover and inactivation of biologically active eicosanoids.

Prostaglandin signaling pathways influence numerous physiologic processes, including immune responses, wound healing, angiogenesis, metabolism, and cellular growth regulation. Enzymes involved in prostaglandin synthesis and degradation function together to maintain appropriate signaling intensity and duration. Prostaglandin Reductase 2 serves an important role within this system by helping prevent excessive or prolonged prostaglandin activity that could contribute to tissue dysfunction or chronic inflammation.

Because dysregulated prostaglandin metabolism has been linked to inflammatory diseases, cardiovascular disorders, and multiple forms of cancer, Prostaglandin Reductase 2 has become a target of growing research interest. Investigators study PTGR2 expression and activity to better understand how prostaglandin catabolism influences disease progression and cellular behavior. Changes in prostaglandin regulatory pathways may significantly impact local tissue signaling environments and downstream biologic responses.

Prostaglandin Reductase 2 is predominantly localized within the cytoplasm and functions as part of broader lipid metabolism and eicosanoid regulatory networks. Research involving this enzyme frequently intersects with studies of cyclooxygenase pathways, prostaglandin receptors, inflammatory signaling cascades, and cellular responses to oxidative and metabolic stress. Characterization of PTGR2 expression can therefore provide valuable information regarding the regulation of lipid-mediated signaling mechanisms.

Prostaglandin Reductase 2 antibodies are commonly utilized in western blotting, immunohistochemistry, immunofluorescence, flow cytometry, and other protein analysis applications. These antibodies support investigations into prostaglandin metabolism, inflammatory regulation, cancer biology, and metabolic signaling pathways. Researchers use Prostaglandin Reductase 2 antibody reagents to evaluate protein expression, cellular localization, and the biologic significance of PTGR2 within normal and disease-associated tissues.

Explore our PTGR2 Antibody page to learn more about PTGR2 expression, biologic function, and available antibody reagents for prostaglandin metabolism research.

Application Notes

Optimal dilution of the Prostaglandin reductase 2 antibody should be determined by the researcher.

Immunogen

An E.coli-derived human recombinant protein (E26-Q305) was used as the immunogen for the Prostaglandin reductase 2 antibody.

Storage

After reconstitution, the Prostaglandin reductase 2 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

PTGR2 Antibody, PG Reductase 2 Antibody, Prostaglandin 9-Ketoreductase Antibody, Eicosanoid Metabolism Enzyme Antibody, Lipid Signaling Regulatory Protein Antibody, NADPH-dependent Oxidoreductase Antibody