

DESCRIPTION

Species Reactivity	Human
Specificity	Detects Human Prostaglandin E Synthase 2/PTGES2 in direct ELISAs.
Source	Monoclonal Mouse IgG _{2A} Clone # 998012
Purification	Protein A or G purified from cell culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant Human Prostaglandin E Synthase 2/PTGES2 Glu88-His377 Accession # Q9H7Z7
Conjugate	Alexa Fluor 532 Excitation Wavelength: 534 nm Emission Wavelength: 553 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunohistochemistry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

PTGES2 (Prostaglandin E Synthase 2; also C9orf15, GBF-1 and mPGES2) is a 32 kDa member of the GST superfamily of molecules. It is a constitutively expressed, integral membrane protein embedded in the Golgi apparatus, and is found in select cell types, including striated muscle cells, neurons, hepatocytes and astrocytes and endothelium. PTGES2 is proposed to lie at the end of a PGE₂ synthetic pathway. PLA₂S is known to first releases arachidonic acid (AA) from membrane phospholipids. This AA is next converted to PGH₂ by COX-1/-2, and the PGH₂ is then potentially isomerized into PGE₂ by PTGES type enzymes. Notably, PTGES2 is not a glutathione-dependent enzyme, and some evidence suggests it is not a functional prostaglandin synthase. Human PTGES2 is potentially a 377 amino acid (aa) type III (no signal sequence) transmembrane protein. It contains a 57 aa luminal region, a 17 aa transmembrane segment (aa 58-74) and a 303 aa cytoplasmic domain (aa 75-377). There is one glutaredoxin domain (aa 90-193) and a GST-like region (aa 263-377). Proteolytic cleavage between Ala87Glu88 of 42-43 kDa full-length PTGES2 generates a soluble 32 kDa short form that localizes perinuclearly. There are two potential alternative splice forms. One contains a 19 aa insertion after Ser159, while a second utilizes an alternative start site at Met192. Over aa 88-377, human PTGES2 shares 91% aa sequence identity with mouse PTGES2.

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.