

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 350 Excitation Wavelength: 346 nm Emission Wavelength: 442 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.

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