PRODUCT INFORMATION

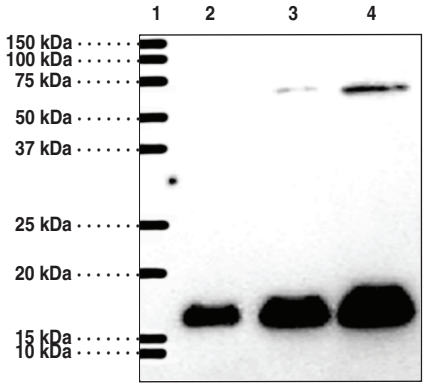
Prostaglandin E Synthase-1 (microsomal) Polyclonal Antibody

Item No. 160140

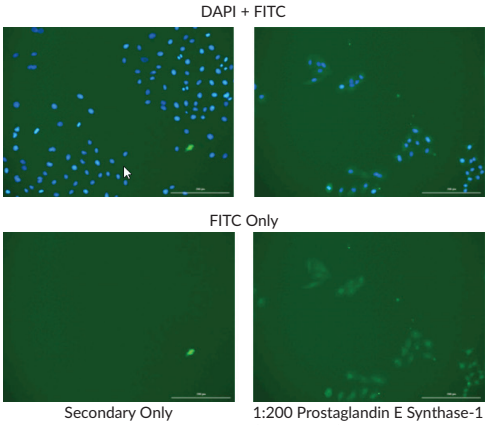
Overview and Properties

Contents:	This vial contains 500 µl of peptide-affinity purified polyclonal antibody.
Synonyms:	Membrane-Associated PGES-1, MGST1-L1, mPGES-1, mPGE Synthase-1, PIG12, Prostaglandin H/E Isomerase
Immunogen:	Peptide from an internal region of human mPGES-1
Species Reactivity:	(+) Human, mouse, ovine, and rat; other species not tested
Uniprot No.:	O14684
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥3 years
Host:	Rabbit
Storage Buffer:	PBS, pH 7.2, with 50% glycerol and 0.02% sodium azide
Application:	Immunofluorescence (IF), Western blot (WB); the recommended starting dilution for is 1:200. Other applications were not tested, therefore optimal working concentration/ dilution should be determined empirically.

Images



Lane 1: Precision Plus Protein Standard
Lane 2: Ram Seminal Vesicles (2 µg)
Lane 3: Ram Seminal Vesicles (5 µg)
Lane 4: Ram Seminal Vesicles (10 µg)



Secondary Only

1:200 Prostaglandin E Synthase-1 (microsomal) Polyclonal Antibody (Item No. 160140)

Immunofluorescence analysis of paraformaldehyde-fixed, A549 cells. After incubation with Prostaglandin E Synthase-1 (microsomal) Polyclonal Antibody (Item No. 160140), at a 1:200 dilution (or negative control) cells were incubated with FITC labeled anti-rabbit IgG (Item No. 10006588), followed by DAPI nuclear stain. Images show FITC alone or both fluorescence channels to highlight nuclear staining (where applicable).

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Description

Prostaglandin E Synthase-1 (PGES-1) catalyzes the isomerization of PGH_2 (Item No. 17020) to PGE_2 (Item No. 14010). PGE_2 is one of the primary COX products of arachidonic acid (item No. 90010) and one of the most widely investigated PGs. Its activity influences inflammation, fertility and parturition, gastric mucosal integrity, and immune modulation.[1-4] PGES-1 is a 16 kDa membrane-associated protein with glutathione-dependent activity.[5] The mRNA is for PGES-1 is expressed in a variety of tissues including prostate, testes, and small intestine, as well as in A549 and HeLa cells.[5] PGES-1 protein expression is increased in A549 cells following treatment with IL-1β.[5]

References

1. Willis, A.L. and Cornelsen, M. Repeated injection of prostaglandin E_2 in rat paws induces chronic swelling and a marked decrease in pain threshold. *Prostaglandins* **3(3)**, 353-357 (1973).
2. Jackson, G.M., Sharp, H.T., and Varner, M.W. Cervical ripening before induction of labor: A randomized trial of prostaglandin E_2 gel versus low-dose oxytocin. *Am. J. Obstet. Gynecol.* **171(4)**, 1092-1096 (1994).
3. Robert, A., Schultz, J.R., Nezamis, J.E., *et al.* Gastric antisecretory and antiulcer properties of PGE_2, 15-methyl PGE_2, and 16,16-dimethyl PGE_2. Intravenous, oral and intrajejunal administration. *Gastroenterology* **70(3)**, 359-370 (1976).
4. Arvind, P., Papavassiliou, E.D., Tsioulias, G.J., *et al.* Prostaglandin E_2 down-regulates the expression of HLA-DR antigen in human colon adenocarcinoma cell lines. *Biochemistry* **34(16)**, 5604-5609 (1995).
5. Jakobsson, P.-J., Thorén, S., Morgenstern, R., *et al.* Identification of human prostaglandin E synthase: A microsomal, gluthathione-dependent, inducible enzyme, constituting a potential novel drug target. *Proc. Natl. Acad. Sci. USA* **96(13)**, 7220-7225 (1999).

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