

PTGES Protein, Mouse (Cell-Free, His, SUMO)

Cat. No.:	HY-P702418
Synonyms:	Microsomal prostaglandin E synthase 1 mPGES-1; Pges
Species:	Mouse
Source:	E. coli Cell-free
Accession:	Q9JM51 (M1-L153)
Gene ID:	64292
Molecular Weight:	35.8 kDa

PROPERTIES

AA Sequence	<p>M P S P G L V M E S G Q V L P A F L L C S T L L V I K M Y A V A V I T G Q M R L</p> <p>R K K A F A N P E D A L K R G G L Q Y Y R S D P D V E R C L R A H R N D M E T I</p> <p>Y P F L F L G F V Y S F L G P N P L I A W I H F L V V L T G R V V H T V A Y L G</p> <p>K L N P R L R S G A Y V L A Q F S C F S M A L Q I L W E V A H H L</p>
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.22 µm filtered solution of Tris/PBS-based buffer, 6% Trehalose, pH 8.0.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O. For long term storage it is recommended to add 5-50% of glycerol (final concentration). Our default final concentration of glycerol is 50%. Customers could use it as reference.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	<p>The PTGES protein serves as the terminal enzyme in the cyclooxygenase (COX)-2-mediated biosynthetic pathway of prostaglandin E₂ (PGE₂), catalyzing the glutathione-dependent oxidoreduction of prostaglandin endoperoxide H₂ (PGH₂) to PGE₂ in response to inflammatory stimuli. This enzymatic process is integral to the regulation of inflammation, fever, and pain. PTGES not only plays a key role in the production of PGE₂ but also exhibits the capability to catalyze the oxidoreduction of endocannabinoids into prostaglandin glycerol esters and 15-hydroperoxy-PGE₂ into PGG₂. Additionally, it displays low glutathione transferase and glutathione-dependent peroxidase activities toward 1-chloro-2,4-dinitrobenzene and 5-hydroperoxyicosatetraenoic acid (5-HPETE), respectively, showcasing the diverse enzymatic functions of PTGES in</p>
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cellular responses to various inflammatory stimuli.

Caution: Product has not been fully validated for medical applications. For research use only.

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