EGLP/GPX5 Protein, Pig (P.pastoris, Myc, His)

Cat. No.:	HY-P71739
Synonyms:	GPX5; Epididymal secretory glutathione peroxidase; EGLP; Glutathione peroxidase 5; GPx-5; GSHPx-5
Species:	Pig
Source:	P. pastoris
Accession:	O18994 (22N-219E)
Gene ID:	396920
Molecular Weight:	Approximately 26.1 kDa

PROPERTIES

AA Sequence	N S N L E K M D C Y K D V T G T I Y D Y D A F T L N G N E H I Q F K Q Y A G K H V L F V N V A T Y C G L T A Q Y P E L N T L Q E E L K P F G L V V L G F P C N Q F G K Q E P G E N S E I L L G L K Y V R P G G G Y V P N F Q L F E K G D V N G E K E Q K V F T F L K H S C P H P S E L I G S I G Y I S W E P I R V H D I R W N F E K F L V G P D G V P V M R W V H E T P I S T V K S D I L A Y L K Q F K T E
Biological Activity	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
Appearance	Lyophilized powder.
Formulation	Lyophilized after extensive dialysis against solution in Tris-based buffer, 50% glycerol.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
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	The EGLP/GPX5 protein emerges as a potential constituent of a protective system akin to glutathione peroxidase, safeguarding sperm membrane lipids against peroxide damage. Despite the limited enzymatic activity towards hydrogen peroxide or organic hydroperoxides exhibited by the purified porcine enzyme, the protective effect suggests a role beyond enzymatic function. Instead, EGLP/GPX5 may protect sperm from premature acrosome reaction in the epididymis by binding to lipid peroxides. This binding action could prevent the interaction of lipid peroxides with phospholipase A2, thereby mitigating the induction of the acrosome reaction. The multifaceted nature of EGLP/GPX5 implies its involvement in

non-enzymatic mechanisms that contribute to the defense against peroxide-induced damage, highlighting its potential significance in preserving sperm viability and functionality. Further investigation is essential to unravel the specific molecular pathways and interactions orchestrated by EGLP/GPX5 in this protective capacity.

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