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PRODUCT INFORMATION



GPX4 Blocking Peptide

Item No. 10005256

Overview and Properties

Contents:	This vial contains 200 µg peptide in 200 µl TBS, pH 7.4, containing 0.1% BSA and 0.02% sodium azide.
Amino Acids:	Human GPX4 amino acids 81-93
Synonyms:	Glutathione Peroxidase 4, PhGPx, Phospholipid Hydroperoxide Glutathione Peroxidase
Storage:	-20°C (as supplied)
Stability:	As supplied, 2 years from the QC date provided on the Certificate of Analysis, when stored properly

Procedures

The GPX4 Blocking Peptide (amino acids 81-93) can be used in conjunction with Cayman's GPX4 Polyclonal Antibody (Item No. 10005258) to block protein-antibody complex formation during immunochemical analysis of GPX4.

To block antibody/protein complex formation, the following procedure is recommended:

1. Mix the GPX4 Polyclonal Antibody (Item No. 10005258) and blocking peptide together in a 1:2 (v/v) ratio in a microfuge tube. For example, mix 20 µl of antibody and 40 µl of peptide.*
2. Incubate for one hour at room temperature with occasional mixing prior to further dilution and application of the mixture to the immunoblot.
3. Dilute the reagents to the final working antibody concentration and apply to the slide or membrane as usual.

*This is a recommended mixture. The minimum amount of peptide needed for complete blocking has not been precisely determined and may vary depending on the sample being analyzed. The amount of peptide required may need to be increased if sufficient blocking does not occur.

Description

Phospholipid hydroperoxide glutathione peroxidase (GPX4 or PhGPx) is one of four characterized selenium-dependent GPXs.¹ GPX4 is found primarily in the testis where it functions both to protect membrane phospholipids from oxidation in spermatids and as an insoluble structural protein in mature spermatozoa.^{1,2} Three different post-translational forms of GPX4 have been characterized: mitochondrial, non-mitochondrial, and sperm nuclei specific selenoprotein.³ These monomeric GPX4 types migrate to 23, 20, and 34 kDa respectively.²⁻⁵ GPX4 also forms a 69 kDa homotetramer.⁵ Cayman's GPX4 polyclonal antibody detects both 20 kDa and 69 kDa bands on immunoblot.

References

1. Giannattasio, A., Girotti, M., Williams, K., *et al.* *J. Endocrinol. Invest.* **20**, 439-444 (1997).
2. Ursini, F., Heim, S., Kiess, M., *et al.* *Science* **285**, 1393-1396 (1999).
3. Nakamura, T., Imai, H., Tsunashima, N., *et al.* *Biochem. Biophys. Res. Commun.* **311**, 139-148 (2003).
4. Sun, Q.-A., Kirnarsky, L., Sherman, S., *et al.* *Proc. Natl. Acad. Sci. USA* **98(7)**, 3673-3678 (2001).
5. Pushpa-Rekha, T.R., Burdsall, A.L., Oleksa, L.M., *et al.* *J. Biol. Chem.* **270(45)**, 26993-26999 (1995).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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