

PRODUCT INFORMATION

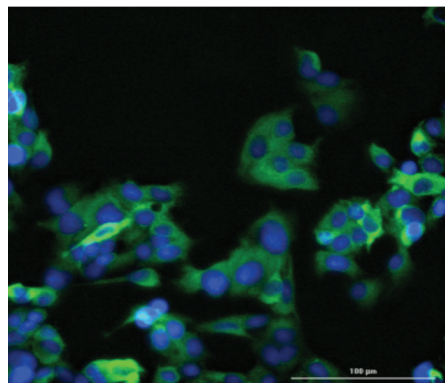


Microsomal Epoxide Hydrolase Monoclonal Antibody (Clone 1H9) Item No. 44096

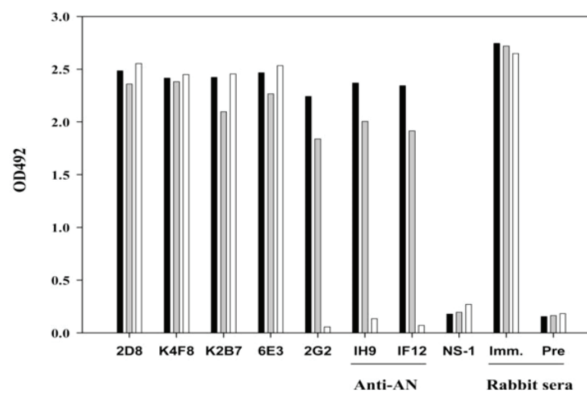
Overview and Properties

Contents:	This vial contains 100 µg protein G-purified monoclonal antibody.
Synonyms:	EPHX1, Epoxide Hydratase, Epoxide Hydrolase 1, mEH
Immunogen:	Recombinant human mEH
Cross Reactivity:	(+) Human
Species Reactivity:	(+) mEH (native protein); other species not tested
Uniprot No.:	P07099
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥3 years
Storage Buffer:	PBS, pH 7.2, with 50% glycerol and 0.02% sodium
Clone:	1H9
Host:	Mouse
Isotype:	IgG1K
Applications:	ELISA and Immunofluorescence (IF); the recommended starting dilution is 1:1,000 for ELISA and 1:200 for IF. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images



Immunofluorescence staining of HepG2 cells. Cells were fixed with PFA and blocked with normal goat serum followed by probing with Microsomal Epoxide Hydrolase Monoclonal Antibody (Clone 1H9) (1:200) and Goat Anti-Mouse (IgG+IgM) FITC (Item No. 10006617). Cells were then counterstained with DAPI.



ELISA of mEH monoclonal antibodies. Various mEH antibody clones were assayed for their detection of membrane-bound mEH (black bars), solubilized mEH (gray bars), and linearized mEH (white bars) at 1:1,000 dilution.

Toxicol. Appl. Pharmacol. **260(1)**: 17-26 (2012). doi: 10.1016/j.taap.2012.01.023

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

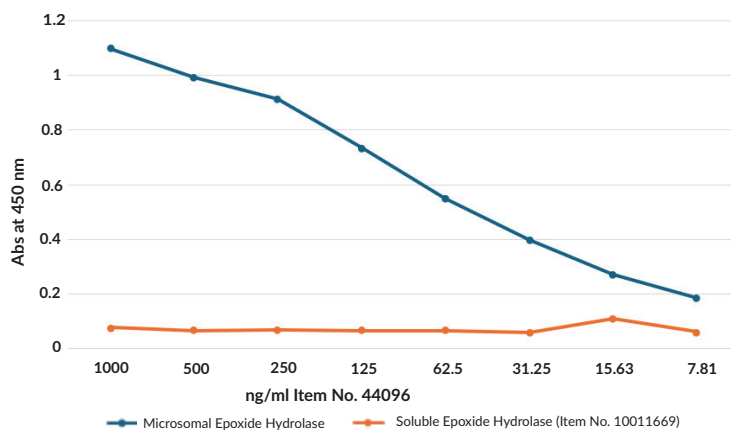
SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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ELISA of Microsomal Epoxide Hydrolase Monoclonal Antibody (Clone 1H9).
The indicated proteins were coated at 1 μ g/ml followed by blocking with 1% BSA and probing with Microsomal Epoxide Hydrolase Monoclonal Antibody (Clone 1H9).

Description

Microsomal epoxide hydrolase (mEH) is a member of the α/β -hydrolase family that catalyzes the hydrolysis of xenobiotic and endogenous epoxides to diols.¹⁻³ It is a single polypeptide chain with the N-terminal region functioning as a membrane anchor and the C-terminus containing the catalytic residues.¹ mEH is localized to the endoplasmic reticulum and ubiquitously expressed, but becomes pseudo-soluble under a variety of pathological conditions.^{1,3} mEH dissociates from the endoplasmic reticulum in neoplastic and preneoplastic liver cells and plasma levels of mEH are positively correlated with the metastasis of Kaposi's sarcoma to the liver.^{3,4} Viral infection by hepatitis C or hepatitis A also induces pseudo-solubilization of mEH and the development of autoantibodies against mEH, which are associated with liver damage and disease progression.^{3,5} Cayman's Microsomal Epoxide Hydrolase Monoclonal Antibody (Clone 1H9) can be used for ELISA and immunofluorescence (IF) applications.

References

1. Václavíková, R., Hughes, D.J., and Souček, P. Microsomal epoxide hydrolase 1 (EPHX1): Gene, structure, function, and role in human disease. *Gene* **571(1)**, 1-8 (2015).
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3. He, Q., McCoy, M.R., Qi, M., *et al.* The generation of a nanobody-based ELISA for human microsomal epoxide hydrolase. *Int. J. Mol. Sci.* **24(19)**, 14698 (2023).
4. Hammock, B.D., Lounsbury, D.N., Moody, D.E., *et al.* A methodology for the analysis of the preneoplastic antigen. *Carcinogenesis* **5(11)**, 1467-1473 (1984).
5. Akatsuka, T., Kobayashi, N., Ishikawa, T., *et al.* Autoantibody response to microsomal epoxide hydrolase in hepatitis C and A. *J. Autoimmun.* **28(1)**, 7-18 (2007).

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