SANTA CRUZ BIOTECHNOLOGY, INC.

sEH (A-5): sc-166961

BACKGROUND

Epoxide hydrolase (EHs) are biotransformation enzymes that catalyze the hydrolysis of arene and aliphatic epoxides to less reactive and more water soluble dihydrodiols by the *trans* addition of water. The enzymatic hydration is essentially irreversible and produces mainly metabolites of lower reactivity that can be conjugated and excreted, and, therefore, are generally regarded as detoxifying. Soluble EH (sEH) is a ubiquitous mammalian enzyme for which liver and kidney are reported to have the highest activity. Microsomal EH (mEH) exhibits a broad substrate specificity, while sEH is an enzyme with a "complementary" substrate specificity to mEH. sEH is expressed in 3T3 and HeLa cells. sEH is encoded by the EPHX2 gene, which maps to chromosome 8p21.2.

CHROMOSOMAL LOCATION

Genetic locus: EPHX2 (human) mapping to 8p21.2; Ephx2 (mouse) mapping to 14 D1.

SOURCE

sEH (A-5) is a mouse monoclonal antibody raised against amino acids 340-554 mapping at the C-terminus of sEH of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

sEH (A-5) is available conjugated to agarose (sc-166961 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166961 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166961 PE), fluorescein (sc-166961 FITC), Alexa Fluor® 488 (sc-166961 AF488), Alexa Fluor® 546 (sc-166961 AF546), Alexa Fluor® 594 (sc-166961 AF594) or Alexa Fluor® 647 (sc-166961 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166961 AF680) or Alexa Fluor® 790 (sc-166961 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

sEH (A-5) is recommended for detection of sEH of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for sEH siRNA (h): sc-44090, sEH siRNA (m): sc-44392, sEH shRNA Plasmid (h): sc-44090-SH, sEH shRNA Plasmid (m): sc-44392-SH, sEH shRNA (h) Lentiviral Particles: sc-44090-V and sEH shRNA (m) Lentiviral Particles: sc-44392-V.

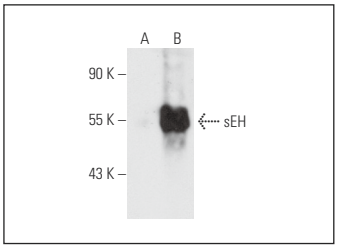
Molecular Weight of sEH: 62 kDa.

Positive Controls: mouse liver extract: sc-2256 or sEH (m): 293T Lysate: sc-123431.

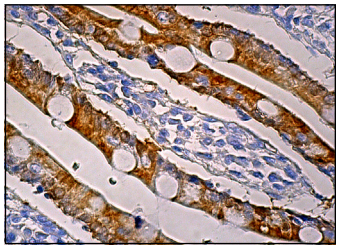
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



sEH (A-5): sc-166961. Western blot analysis of sEH expression in non-transfected: sc-117752 (**A**) and mouse sEH transfected: sc-123431 (**B**) 293T whole cell lysates.



sEH (A-5): sc-166961. Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Charles, R.L., et al. 2011. Redox regulation of soluble epoxide hydrolase by 15-deoxy-Δ-prostaglandin J_2 controls coronary hypoxic vasodilation. Circ. Res. 108: 324-334.
2. Cizkova, K., et al. 2016. Soluble epoxide hydrolase as a potential key factor for human prenatal development. Cells Tissues Organs 201: 277-286.
3. Stevenson, M.D., et al. 2018. NADPH oxidase 4 regulates inflammation in ischemic heart failure: role of soluble epoxide hydrolase. Antioxid. Redox Signal. 31: 39-58.
4. Grant, M.K.O., et al. 2019. Sexual dimorphism of acute doxorubicin-induced nephrotoxicity in C57Bl/6 mice. PLoS ONE 14: e0212486.
5. Jiang, X.S., et al. 2020. Inhibition of soluble epoxide hydrolase attenuates renal tubular mitochondrial dysfunction and ER stress by restoring autophagic flux in diabetic nephropathy. Cell Death Dis. 11: 385.
6. Lepczynski, A., et al. 2021. Effects of three-month feeding high fat diets with different fatty acid composition on myocardial proteome in mice. Nutrients 13: 330.
7. Park, B., et al. 2022. Decreased expression of soluble epoxide hydrolase suppresses murine choroidal neovascularization. Int. J. Mol. Sci. 23: 15595.
8. Park, J.H., et al. 2023. Anti-inflammatory of disenecionyl *cis*-khellactone in LPS-stimulated RAW264.7cells and the its inhibitory activity on soluble epoxide hydrolase. Heliyon 9: e21032.
9. Wang, W., et al. 2023. Soluble epoxide hydrolase contributes to cell senescence and ER stress in aging mice colon. Int. J. Mol. Sci. 24: 4570.
10. Kim, J.M., et al. 2025. *Magnolia kobus DC.* suppresses neointimal hyperplasia by regulating ferroptosis and VSMC phenotypic switching in a carotid artery ligation mouse model. Chin. Med. 20: 3.

RESEARCH USE

For research use only, not for use in diagnostic procedures.