**Xanthine Oxidase (A-3): sc-398548**

**BACKGROUND**

The process of metabolizing purines to a common molecule known as Xanthine is an essential process for the proper shuttling of uric acid. Xanthine Oxidase is a flavoprotein enzyme that coordinates molybdenum and utilizes NAD+ as an electron acceptor to catalyze the oxidation of hypoxanthine to Xanthine and then to uric acid. The predominant form of this enzyme is Xanthine dehydrogenase, which is a homodimer that can be converted to Xanthine Oxidase by sulfhydryl oxidation or proteolytic modification. Xanthine Oxidase is present in species ranging from bacteria to human and is ubiquitously expressed in mammalian tissues. In the oxidase form, this enzyme is coupled to the generation of free radicals. Individuals showing marked elevation of serum Xanthine Oxidase is suggestive of chronic liver disease and cholestasis, which is a condition defined by hepatic obstruction. Hepatic obstruction causes bile salts, the bile pigment bilirubin and fats to accumulate in the blood stream instead of being eliminated normally. The clinical consequences of defects in Xanthine Oxidase range from mild to severe and even contribute to fatal disorders.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: XDH (human) mapping to 2p23.1; Xdh (mouse) mapping to 17 E2.

**SOURCE**

Xanthine Oxidase (A-3) is a mouse monoclonal antibody raised against amino acids 251-360 of Xanthine Oxidase of human origin.

**PRODUCT**

Each vial contains 200 µg IgG2a kappa light chain in 1.0 ml of PBS with <0.1% sodium azide and 0.1% gelatin.

Xanthine Oxidase (A-3) is available conjugated to agarose (sc-398548 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398548 HRP), 200 µg/ml, for WB, IHC and ELISA; to either phycoerythrin (sc-398548 PE), fluorescein (sc-398548 FITC), Alexa Fluor® 488 (sc-398548 AF488), Alexa Fluor® 546 (sc-398548 AF546), Alexa Fluor® 594 (sc-398548 AF594) or Alexa Fluor® 647 (sc-398548 AF647), 200 µg/ml, for WB (RGB), IF, IHC and FCM; and to either Alexa Fluor® 680 (sc-398548 AF680) or Alexa Fluor® 790 (sc-398548 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA.

**STORAGE**

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

**APPLICATIONS**

Xanthine Oxidase (A-3) is recommended for detection of Xanthine Oxidase 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 1:50-1:1500), 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).


Molecular Weight of Xanthine Oxidase: 150 kDa.

Positive Controls: c4 whole cell lysate: sc-364186 or SolB cell lysate: sc-2249.

**DATA**

Xanthine Oxidase (A-3): sc-398548. Western blot analysis of Xanthine Oxidase expression in c4 (A) and SolB (B) whole cell lysates.

Xanthine Oxidase (A-3): sc-398548. Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing cytoplasmic staining of glandular cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing cytoplasmic staining of glandular cells (B).

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

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