SANTA CRUZ BIOTECHNOLOGY, INC.

uricase (C-11): sc-166214

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

In most mammals, urate oxidase (uricase) is present in liver, with little or no detectable activity in other tissues. It is associated with the peroxisomes and exists as a tetramer. Humans and certain primates lack this enzyme, which catalyzes the oxidation of uric acid to allantoin. The human Lesch-Nyhan syndrome is a rare neurological and behavioral disorder caused by an inherited deficiency in the level of activity of the purine salvage enzyme hypoxanthine-guanosine phosphoribosyl transferase (HPRT). The identification of mice with complete HPRT deficiency but without any symptoms of the Lesch-Nyhan syndrome raises the possibility that the absence of uricase activity in the purine metabolism pathway may contribute to the development of the neurologic symptoms observed in humans. Comparison of the sequences in man, mouse and pig suggested that loss of uricase function in man was due to a sudden mutational event. The gene which encodes uricase maps to human chromosome 1p22.

CHROMOSOMAL LOCATION

Genetic locus: Uox (mouse) mapping to 3 H2.

SOURCE

uricase (C-11) is a mouse monoclonal antibody raised against amino acids 1-303 representing full length uricase of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} lambda light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

uricase (C-11) is available conjugated to agarose (sc-166214 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-166214 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166214 PE), fluorescein (sc-166214 FITC), Alexa Fluor® 488 (sc-166214 AF488), Alexa Fluor® 546 (sc-166214 AF546), Alexa Fluor® 594 (sc-166214 AF594) or Alexa Fluor® 647 (sc-166214 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166214 AF680) or Alexa Fluor® 790 (sc-166214 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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

APPLICATIONS

uricase (C-11) is recommended for detection of uricase of mouse and rat 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for uricase siRNA (m): sc-41089, uricase shRNA Plasmid (m): sc-41089-SH and uricase shRNA (m) Lentiviral Particles: sc-41089-V.

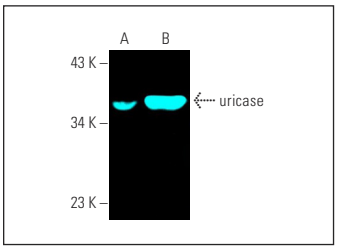
Molecular Weight of uricase: 32 kDa.

Positive Controls: mouse liver extract: sc-2256 or rat liver extract: sc-2395.

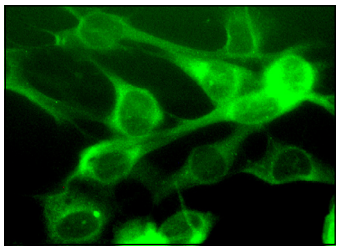
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGλ BP-HRP: sc-516132 or m-IgGλ BP-HRP (Cruz Marker): sc-516132-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGλ BP-FITC: sc-516185 or m-IgGλ BP-PE: sc-516186 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



uricase (C-11) Alexa Fluor® 647: sc-166214 AF647. Direct fluorescent western blot analysis of uricase expression in rat liver (**A**) and mouse liver (**B**) tissue extracts. Blocked with UltraCruz® Blocking Reagent: sc-516214.



uricase (C-11): sc-166214. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Xie, D., et al. 2021. High uric acid induces liver fat accumulation via ROS/JNK/AP-1 signaling. Am. J. Physiol. Endocrinol. Metab. 320: E1032-E1043.
2. Wu, M., et al. 2021. Hyperuricemia causes kidney damage by promoting autophagy and NLRP3-mediated inflammation in rats with urate oxidase deficiency. Dis. Model. Mech. 14: dmm048041.
3. Zhou, X., et al. 2024. Gut microbiota dysbiosis in hyperuricaemia promotes renal injury through the activation of NLRP3 inflammasome. Microbiome 12: 109.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.