SANTA CRUZ BIOTECHNOLOGY, INC.

kynureninase (E-5): sc-390360

BACKGROUND

Kynureninase, also known as L-kynurenine hydrolase, is a 465 amino acid cytoplasmic enzyme. Kynureninase is involved in two pathways; the degredation of L-kynurenine and the biosynthesis of the cofactor NAD^+. The main function of kynureninase is to catalyze the cleavage of L-kynurenine into anthranilic acid and of L-3-hydroxykynurenine into 3-hydroxyanthranilic acid, exhibiting a preference for the L-3-hydroxy form. Kynureninase forms a homodimer, uses pyridoxal phosphate as a cofactor and is inhibited by o-methoxybenzoylalanine (OMBA). Kynureninase is widely expressed, with highest levels found in lung, placenta and liver. Deficiency in kynureninase leads to hyperkynureninuria, a disorder characterized by the inability to break down tryptophan to nicotinic acid (vitamin B6). Increased levels of kynureninase activity are observed in systemic and cerebral inflammatory conditions.

CHROMOSOMAL LOCATION

Genetic locus: KYNU (human) mapping to 2q22.2.

SOURCE

kynureninase (E-5) is a mouse monoclonal antibody raised against amino acids 104-308 mapping within an internal region of kynureninase 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.

kynureninase (E-5) is available conjugated to agarose (sc-390360 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-390360 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390360 PE), fluorescein (sc-390360 FITC), Alexa Fluor® 488 (sc-390360 AF488), Alexa Fluor® 546 (sc-390360 AF546), Alexa Fluor® 594 (sc-390360 AF594) or Alexa Fluor® 647 (sc-390360 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390360 AF680) or Alexa Fluor® 790 (sc-390360 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

kynureninase (E-5) is recommended for detection of kynureninase of 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for kynureninase siRNA (h): sc-95023, kynureninase shRNA Plasmid (h): sc-95023-SH and kynureninase shRNA (h) Lentiviral Particles: sc-95023-V.

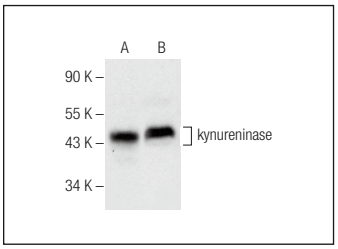
Molecular Weight of kynureninase: 52 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, A549 cell lysate: sc-2413 or human liver extract: sc-363766.

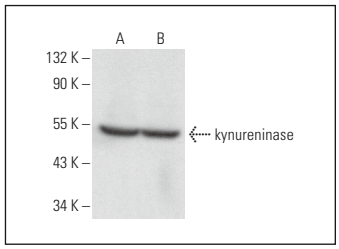
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-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-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



kynureninase (E-5): sc-390360. Western blot analysis of kynureninase expression in Hep G2 whole cell lysate (**A**) and human liver tissue extract (**B**).



kynureninase (E-5): sc-390360. Western blot analysis of kynureninase expression in A549 (**A**) and THP-1 (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Yang, R., et al. 2019. Combined transcriptome and proteome analysis of immortalized human keratinocytes expressing human papillomavirus 16 (HPV16) oncogenes reveals novel key factors and networks in HPV-induced carcinogenesis. mSphere 4: e00129-19.
2. Fahrmann, J.F., et al. 2022. Mutational activation of the Nrf2 pathway upregulates kynureninase resulting in tumor immunosuppression and poor outcome in lung adenocarcinoma. Cancers 14: 2543.

STORAGE

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

PROTOCOLS

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