

kynureninase (I-14): sc-132733

BACKGROUND

Kynureninase, also known as L-kynurenine hydrolase, is a 465 amino acid cytoplasmic enzyme. Kynureninase is involved in two pathways; the degradation 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.

REFERENCES

1. Komrower, G. et al. 1964. Hydroxykynureninuria: a case of abnormal tryptophane metabolism probably due to a deficiency of kynureninase. *Arch. Dis. Child.* 39: 250-256.
2. Online Mendelian Inheritance in Man, OMIM™. 1986. Johns Hopkins University, Baltimore, MD. MIM Number: 236800. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
3. Heyes, M.P., et al. 1993. A mechanism of quinolinic acid formation by brain in inflammatory neurological disease. Attenuation of synthesis from L-tryptophan by 6-chlorotryptophan and 4-chloro-3-hydroxyanthranilate. *Brain* 116: 1425-1450.
4. Alberati-Giani, D., et al. 1996. Isolation and expression of a cDNA clone encoding human kynureninase. *Eur. J. Biochem.* 239: 460-468.
5. Cheminal, R., et al. 1996. Congenital non-progressive encephalopathy and deafness with intermittent episodes of coma and hyperkynureninuria. *J. Inherit. Metab. Dis.* 19: 25-30.

CHROMOSOMAL LOCATION

Genetic locus: KYNU (human) mapping to 2q22.2; Kynu (mouse) mapping to 2 B.

SOURCE

kynureninase (I-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of kynureninase of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-132733 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

kynureninase (I-14) is recommended for detection of kynureninase of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

kynureninase (I-14) is also recommended for detection of kynureninase in additional species, including canine.

Suitable for use as control antibody for kynureninase siRNA (h): sc-95023, kynureninase siRNA (m): sc-146615, kynureninase shRNA Plasmid (h): sc-95023-SH, kynureninase shRNA Plasmid (m): sc-146615-SH, kynureninase shRNA (h) Lentiviral Particles: sc-95023-V and kynureninase shRNA (m) Lentiviral Particles: sc-146615-V.

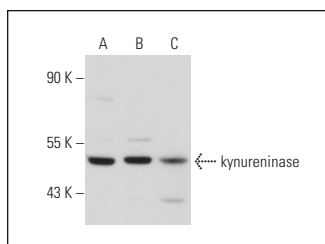
Molecular Weight of kynureninase: 52 kDa.

Positive Controls: mouse liver extract: sc-2256, Hep G2 cell lysate: sc-2227 or c4 cell lysate.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



kynureninase (I-14): sc-132733. Western blot analysis of kynureninase expression in c4 (A) and AMJ2-C8 (B) whole cell lysates and mouse liver tissue extract (C).

RESEARCH USE

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

PROTOCOLS

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