

HXK II (H-95): sc-28889

BACKGROUND

The hexokinases utilize Mg-ATP as a phosphoryl donor to catalyze the first step of intracellular glucose metabolism, the conversion of glucose to glucose-6-phosphate. Four hexokinase isoenzymes have been identified, including hexokinase I (HXK I), hexokinase II (HXK II), hexokinase III (HXK III) and hexokinase IV (HXK IV, also designated glucokinase or GCK). Hexokinases I-III each contain an N-terminal cluster of hydrophobic amino acids. Glucokinase lacks the N-terminal hydrophobic cluster. The hydrophobic cluster is thought to be necessary for membrane binding. This is substantiated by the finding that glucokinase has lower affinity for glucose than do the other hexokinases. HXK I has been shown to be expressed in brain, kidney and heart tissues as well as in hepatoma cell lines. HXK II is involved in the uptake and utilization of glucose by adipose and skeletal tissues. Of the hexokinases, HXK III has the highest affinity for glucose. Glucokinase is expressed in pancreatic β cells where it functions as a glucose sensor, determining the "set point" for insulin secretion.

REFERENCES

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- Arora, K.K., et al. 1990. Glucose phosphorylation in tumor cells. Cloning, sequencing, and overexpression in active form of a fulllength cDNA encoding a mitochondrial bindable form of hexokinase. *J. Biol. Chem.* 265: 6481-6488.
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- Deeb, S.S., et al. 1993. Human hexokinase II: sequence and homology to other hexokinases. *Biochem. Biophys. Res. Commun.* 197: 68-74.

CHROMOSOMAL LOCATION

Genetic locus: HK2 (human) mapping to 2p12; Hk2 (mouse) mapping to 6 C3.

SOURCE

HXK II (H-95) is a rabbit polyclonal antibody raised against amino acids 316-410 mapping within an internal region of HXK II of human origin.

PRODUCT

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

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.

APPLICATIONS

HXK II (H-95) is recommended for detection of HXK II of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

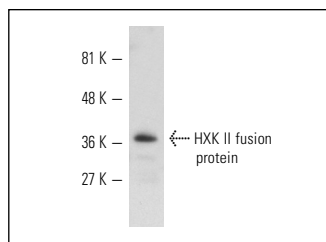
HXK II (H-95) is also recommended for detection of HXK II in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for HXK II siRNA (h): sc-35621, HXK II siRNA (m): sc-35622, HXK II shRNA Plasmid (h): sc-35621-SH, HXK II shRNA Plasmid (m): sc-35622-SH, HXK II shRNA (h) Lentiviral Particles: sc-35621-V and HXK II shRNA (m) Lentiviral Particles: sc-35622-V.

Molecular Weight of HXK II: 100 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Sol8 cell lysate: sc-2249 or A-10 cell lysate: sc-3806.

DATA



HXK II (H-95): sc-28889. Western blot analysis of human recombinant HXK II fusion protein.

SELECT PRODUCT CITATIONS

- Huc, L., et al. 2007. c-Jun NH₂-terminal kinase-related Na⁺/H⁺ exchanger isoform 1 activation controls hexokinase II expression in benzo(a)pyrene-induced apoptosis. *Cancer Res.* 67: 1696-1705.
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- Mertens, K., et al. 2012. *In vitro* 2-deoxy-2-[18F]fluoro-D-glucose uptake: practical considerations. *Cancer Biother. Radiopharm.* 27: 183-188.

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Try **HXK II (B-8): sc-374091** or **HXK II (1A7): sc-130358**, our highly recommended monoclonal alternatives to HXK II (H-95). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **HXK II (B-8): sc-374091**.