10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-Hexokinase II Picoband Antibody

Catalog # ABO10181

Product Information

Application	WB
Primary Accession	P52789
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Hexokinase-2 (HK2) detection. Tested with WB in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	3099
Other Names	Hexokinase-2, 2.7.1.1, Hexokinase type II, HK II, Muscle form hexokinase, HK2
Calculated MW	102380
Application Details	Western blot, 0.1-0.5 □g/ml, Human, Mouse, Rat
Subcellular Localization	Mitochondrion outer membrane . Its hydrophobic N-terminal sequence may be involved in membrane binding. .
Tissue Specificity	Predominant hexokinase isozyme expressed in insulin-responsive tissues such as skeletal muscle.
Source	Eukaryota
Protein Name	Hexokinase-2
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Immunogen	A synthetic peptide corresponding to a sequence in the middle region of human Hexokinase II (460-497aa AYRLADQHRARQKTLEHLQLSHDQLLEVKRRMKVEMER), different from the related mouse and rat sequences by four amino acids.
Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins.
Storage	At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also

be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.

Protein Information

Name

HK2 (HGNC:4923)

Function

Catalyzes the phosphorylation of hexose, such as D-glucose and D-fructose, to hexose 6-phosphate (D-glucose 6-phosphate and D- fructose 6-phosphate, respectively) (PubMed:23185017, PubMed:26985301, PubMed:29298880). Mediates the initial step of glycolysis by catalyzing phosphorylation of D-glucose to D-glucose 6-phosphate (PubMed:29298880). Plays a key role in maintaining the integrity of the outer mitochondrial membrane by preventing the release of apoptogenic molecules from the intermembrane space and subsequent apoptosis (PubMed:18350175).

Cellular Location

Mitochondrion outer membrane; Peripheral membrane protein. Cytoplasm, cytosol Note=The mitochondrial-binding peptide (MBP) region promotes association with the mitochondrial outer membrane (PubMed:29298880) The interaction with the mitochondrial outer membrane via the mitochondrial-binding peptide (MBP) region promotes higher stability of the protein (PubMed:29298880). Release from the mitochondrial outer membrane into the cytosol induces permeability transition pore (PTP) opening and apoptosis (PubMed:18350175).

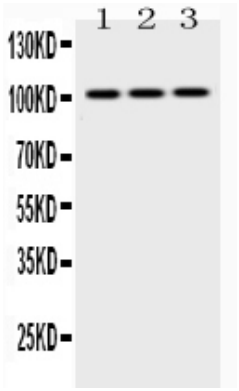
Tissue Location

Predominant hexokinase isozyme expressed in insulin-responsive tissues such as skeletal muscle

Background

Hexokinase 2, also known as HK2, is an enzyme which in humans is encoded by the HK2 gene on chromosome 2. Hexokinases phosphorylate glucose to produce glucose-6-phosphate, the first step in most glucose metabolism pathways. This gene encodes hexokinase 2, the predominant form found in skeletal muscle. It localizes to the outer membrane of mitochondria. Expression of this gene is insulin-responsive, and studies in rat suggest that it is involved in the increased rate of glycolysis seen in rapidly growing cancer cells.

Images



Western blot analysis of Hexokinase II expression in rat testis extract (lane 1), mouse testis extract (lane 2) and JURKAT whole cell lysates (lane 3). Hexokinase II at 102KD was detected using rabbit anti- Hexokinase II Antigen Affinity purified polyclonal antibody (Catalog # ABO10181) at 0.5 □¼g/mL. The blot was developed using chemiluminescence (ECL) method .

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.