

#2867 Store at -20°C

Hexokinase II (C64G5) Rabbit mAb

100 µl
 (10 western blots)



Orders ■ 877-616-CELL (2355)
 orders@cellsignaling.com
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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IHC-P, IF-IC Endogenous	H, M, R, Mk	102 kDa	Rabbit IgG**

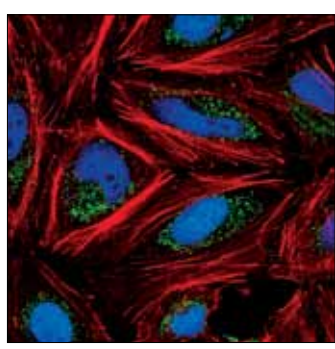
Background: Hexokinase catalyzes the conversion of glucose to glucose-6-phosphate, the first step in glycolysis. Four distinct mammalian hexokinase isoforms, designated as hexokinase I, II, III and IV (glucokinase), have been identified. Hexokinases I, II and III are associated with the outer mitochondrial membrane and are critical for maintaining an elevated rate of aerobic glycolysis in cancer cells (Warburg Effect) (1) in order to compensate for the increased energy demands associated with the rapid cell growth and proliferation (2,3).

Specificity/Sensitivity: Hexokinase II (C64G5) Rabbit mAb detects endogenous levels of total hexokinase II protein.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to the sequence of human hexokinase II.

Background References:

- Warburg, O. (1956) *Science* 123, 309–314.
- Semenza, G.L. (2000) *Crit. Rev. Biochem. Mol. Biol.* 35, 71–103.
- Smith, T.A. (2000) *Br. J. Biomed. Sci.* 57, 170–178.



Confocal immunofluorescent analysis of HeLa cells using Hexokinase II (C64G5) Rabbit mAb (green). Actin filaments have been labeled with DY-554 phalloidin (red). Blue pseudocolor = DRAQ5® #4084 (fluorescent DNA dye).

Entrez-Gene ID #3099
Swiss-Prot Acc. #P52789

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

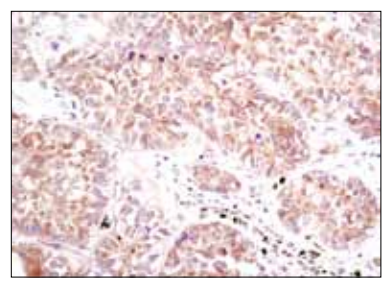
***Species cross-reactivity is determined by western blot.**
****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:

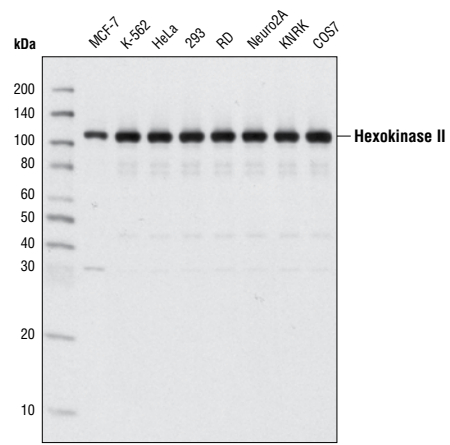
Western blotting	1:1000
Immunohistochemistry (Paraffin)	1:50
Unmasking buffer:	Citrate
Antibody diluent:	SignalStain® Antibody Diluent #8112
Immunofluorescence (IF-IC)	1:1600

For application specific protocols please see the web page for this product at www.cellsignaling.com.

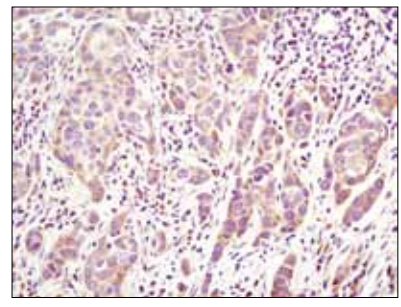
Please visit www.cellsignaling.com for a complete listing of recommended companion products.



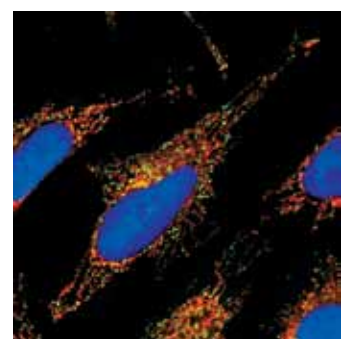
Immunohistochemical analysis of paraffin-embedded human lung carcinoma using Hexokinase II (C64G5) Rabbit mAb.



Western blot analysis of extracts from various cell types using Hexokinase II (C64G5) Rabbit mAb.



Immunohistochemical analysis of paraffin-embedded human breast carcinoma using Hexokinase II (C64G5) Rabbit mAb in the presence of control peptide (upper) or antigen-specific peptide (lower).



Confocal immunofluorescent analysis of HeLa cells using Hexokinase II (C64G5) Rabbit mAb #2867 (green) and MitoTracker® Red CMXRos, which stains mitochondria, demonstrating colocalization. Blue pseudocolor = DRAQ5® #4084 (fluorescent DNA dye).

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine
 Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.

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