#5091 Store at -20°C

HIPK2 Antibody

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For Research Use Only. Not For Use In Diagnostic Procedures.

Entrez-Gene ID #28996
Swiss-Prot Acc. #Q9H2X6

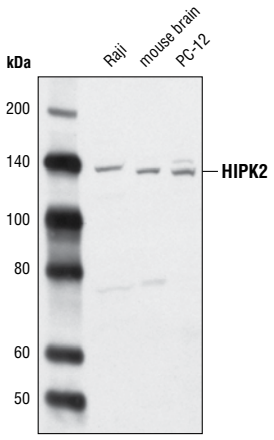
Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W Endogebous	H, M, R	130-140	Rabbit**

Background: Members of the homeodomain-interacting protein kinase (HIPK1-4) family of serine/threonine kinases regulate gene transcription with effects on cell proliferation, differentiation, and apoptosis (1-3). HIPK1-3 are nuclear proteins that were originally described as co-repressors for homeobox transcription factors (1). HIPK proteins can interact with and/or phosphorylate many transcriptional regulators (4).

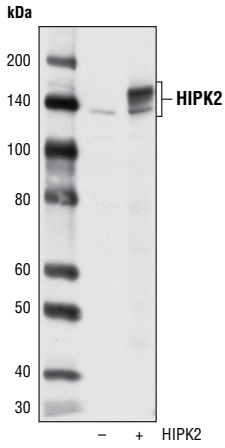
HIPK2 activated in response to DNA damage, including UV radiation and chemotherapeutic drugs, phosphorylates p53 at Ser46 to promote the transcription of pro-apoptotic p53 target genes (5-7). In addition, HIPK2 interacts with a number of transcription factors that control developmental processes, tumor suppression and apoptosis (4). The kinase is regulated by both sumoylation (8) and ubiquitination (9,10). Ubiquitination and subsequent degradation of HIPK2 is inhibited by DNA damaging agents. Caspase-dependent cleavage of HIPK2 removes the inhibitory domain and results in enhanced HIPK2 activity (11).

Specificity/Sensitivity: HIPK2 Antibody detects endogenous levels of total HIPK2 protein.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gln1045 of human HIPK2 protein. Antibodies were purified by protein A and peptide affinity chromatography.



Western blot analysis of extracts from Raji cells, mouse brain, and PC-12 cells using HIPK2 Antibody.



Western blot analysis of extracts from 293T cells, mock transfected (-) or transfected with a mouse HIPK2 construct (+), using HIPK2 Antibody.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. 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

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

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

Background References:

(1) Kim, Y.H. et al. (1998) *J Biol Chem* 273, 25875-9.
(2) Rochat-Steiner, V. et al. (2000) *J Exp Med* 192, 1165-74.
(3) Arai, S. et al. (2007) *FEBS Lett* 581, 5649-57.
(4) Rinaldo, C. et al. (2007) *Biochem Cell Biol* 85, 411-8.
(5) Hofmann, T.G. et al. (2002) *Nat Cell Biol* 4, 1-10.
(6) D'Orazi, G. et al. (2002) *Nat Cell Biol* 4, 11-9.
(7) Di Stefano, V. et al. (2004) *Exp Cell Res* 293, 311-20.
(8) Kim, Y.H. et al. (1999) *Proc Natl Acad Sci U S A* 96, 12350-5.
(9) Choi, D.W. et al. (2008) *J Biol Chem* 283, 4682-9.
(10) Winter, M. et al. (2008) *Nat Cell Biol* 10, 812-24.
(11) Gresko, E. et al. (2006) *EMBO J* 25, 1883-94.

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSAw, 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.