

#5091 Store at -20C

HIPK2 Antibody



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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB	H M R	Endogenous	130-140	Rabbit	#Q9H2X6	28996

Product Usage Information

Application

Western Blotting

Dilution

1:1000

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.

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.

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).

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.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

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

Applications Key

WB: Western Blotting

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **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 **GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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