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Phospho-HIPK2(Y361) Antibody

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP3616a

Product Information

Application	WB, DB, E
Primary Accession	Q9H2X6
Other Accession	O88850, Q9ERH7, Q9H422, Q9QZR5, A4L9P5, O88904, Q86Z02
Reactivity	Human
Predicted	Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB16666
Calculated MW	130966

Additional Information

Gene ID	28996
Other Names	Homeodomain-interacting protein kinase 2, hHIPk2, HIPK2
Target/Specificity	This HIPK2 Antibody is generated from rabbits immunized with a KLH conjugated synthetic phosphopeptide corresponding to amino acid residues surrounding Y361 of human HIPK2.
Dilution	WB~~1:1000 DB~~1:500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Phospho-HIPK2(Y361) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	HIPK2
Function	Serine/threonine-protein kinase involved in transcription regulation, p53/TP53-mediated cellular apoptosis and regulation of the cell cycle. Acts as a corepressor of several transcription factors, including SMAD1 and POU4F1/Brn3a and probably NK homeodomain transcription factors.

	Phosphorylates PDX1, ATF1, PML, p53/TP53, CREB1, CTBP1, CBX4, RUNX1, EP300, CTNNB1, HMGA1, ZBTB4 and DAZAP2. Inhibits cell growth and promotes apoptosis through the activation of p53/TP53 both at the transcription level and at the protein level (by phosphorylation and indirect acetylation). The phosphorylation of p53/TP53 may be mediated by a p53/TP53-HIPK2-AXIN1 complex. Involved in the response to hypoxia by acting as a transcriptional co-suppressor of HIF1A. Mediates transcriptional activation of TP73. In response to TGFB, cooperates with DAXX to activate JNK. Negative regulator through phosphorylation and subsequent proteasomal degradation of CTNNB1 and the antiapoptotic factor CTBP1. In the Wnt/beta-catenin signaling pathway acts as an intermediate kinase between MAP3K7/TAK1 and NLK to promote the proteasomal degradation of MYB. Phosphorylates CBX4 upon DNA damage and promotes its E3 SUMO-protein ligase activity. Activates CREB1 and ATF1 transcription factors by phosphorylation in response to genotoxic stress. In response to DNA damage, stabilizes PML by phosphorylation. PML, HIPK2 and FBXO3 may act synergically to activate p53/TP53-dependent transactivation. Promotes angiogenesis, and is involved in erythroid differentiation, especially during fetal liver erythropoiesis. Phosphorylation of RUNX1 and EP300 stimulates EP300 transcription regulation activity. Triggers ZBTB4 protein degradation in response to DNA damage. In response to DNA damage, phosphorylates DAZAP2 which localizes DAZAP2 to the nucleus, reduces interaction of DAZAP2 with HIPK2 and prevents DAZAP2-dependent ubiquitination of HIPK2 by E3 ubiquitin-protein ligase SIAH1 and subsequent proteasomal degradation (PubMed:33591310). Modulates HMGA1 DNA-binding affinity. In response to high glucose, triggers phosphorylation-mediated subnuclear localization shifting of PDX1. Involved in the regulation of eye size, lens formation and retinal lamination during late embryogenesis.
Cellular Location	Nucleus, PML body. Cytoplasm Cytoplasm, Stress granule Note=Concentrated in PML/POD/ND10 nuclear bodies. Small amounts are cytoplasmic
Tissue Location	Highly expressed in heart, muscle and kidney. Weakly expressed in a ubiquitous way. Down-regulated in several thyroid and breast tumors.

Background

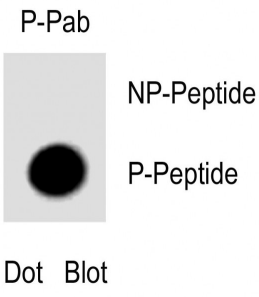
HIPK2 is a conserved serine/threonine nuclear kinase that interacts with homeodomain transcription factors.

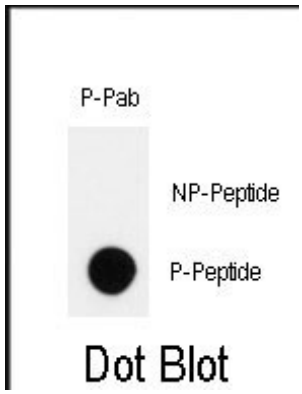
References

Guha U, et al. (2008) Proc Natl Acad Sci U S A 105, 14112-7
Daub H, et al. (2008) Mol Cell 31, 438-48
Guo A, et al. (2008) Proc Natl Acad Sci U S A 105, 692-7
Rikova K, et al. (2007) Cell 131, 1190-203

Images

Dot blot analysis of Phospho-HIPK2(Y361) Antibody Phospho-specific Pab (Cat. AP3616a) on nitrocellulose membrane. 50ng of Phospho-peptide or Non Phospho-peptide per dot were adsorbed. Antobodies working concentration was 0. 5ug per ml.





Dot blot analysis of anti-Phospho-HIPK2-pY361 Antibody (Cat.#AP3616a) on nitrocellulose membrane. 50ng of Phospho-peptide or Non Phospho-peptide per dot were adsorbed. Antibody working concentrations are 0.5ug per ml.