

**HIPK2 Antibody (C-term D1050) Blocking Peptide**  
**Synthetic peptide**  
**Catalog # BP7539d****Specification**

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**HIPK2 Antibody (C-term D1050) Blocking Peptide - Product Information**Primary Accession [Q9H2X6](#)**HIPK2 Antibody (C-term D1050) Blocking Peptide - Additional Information****Gene ID** 28996**Other Names**

Homeodomain-interacting protein kinase 2, hHIPk2, HIPK2

**Target/Specificity**

The synthetic peptide sequence used to generate the antibody [AP7539d](/product/products/AP7539d) was selected from the C-term region of human HIPK2. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

**Format**

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

**HIPK2 Antibody (C-term D1050) Blocking Peptide - 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:<a href="http://www.uniprot.org/citations/33591310" target="\_blank">33591310</a>). 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.

### **HIPK2 Antibody (C-term D1050) Blocking Peptide - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

### **HIPK2 Antibody (C-term D1050) Blocking Peptide - Images**

### **HIPK2 Antibody (C-term D1050) Blocking Peptide - Background**

HIPK2, a member of the KIPK subfamily of Ser/Thr protein kinases, phosphorylates homeodomain transcription factors. It may play a role as a corepressor for homeodomain transcription factors. This nuclear protein has been shown to interact with TRADD. It is highly expressed in neuronal tissues, heart and kidney, and weakly expressed in a ubiquitous way. HIPK2 is a target for sumoylation, and when conjugated it is directed to nuclear speckles

### **HIPK2 Antibody (C-term D1050) Blocking Peptide - References**

Li, X., et al., Biochem. Biophys. Res. Commun. 277(2):513-517 (2000). Wang, Y., et al., Biochim. Biophys. Acta 1518 (1-2), 168-172 (2001).