10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.622.0609

HIPK2 Blocking Peptide (N-term D69)

Synthetic peptide
Catalog # BP7539e

Specification

HIPK2 Blocking Peptide (N-term D69) - Product Information

Primary Accession	Q9H2X6
Other Accession	Q9QZR5

HIPK2 Blocking Peptide (N-term D69) - Additional Information

Gene ID 28996

Other Names
Homeodomain-interacting protein kinase 2, hHIPk2, HIPK2

Target/Specificity
The synthetic peptide sequence is selected from aa 452-468 of HUMAN HIPK2

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 Blocking Peptide (N-term D69) - 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

HIPK2 Blocking Peptide (N-term D69) - Background

HIPK2, a member of the KIPK subfamily of Ser/Thr protein kinases, phosphorylates homeodomain transcription factors and 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 Blocking Peptide (N-term D69) - 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).

POU4F1/Brn3a and probably NK homeodomain transcription factors. Phosphorylates PDX1, ATF1, PML, p53/TP53, CREB1, CTBP1, CBX4, RUNX1, EP300, CTNNB1, HMGA1 and ZBTB4. 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. 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. 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 Blocking Peptide (N-term D69) - Protocols

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

- Blocking Peptides