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VRK1 Antibody (Center) Blocking Peptide
Synthetic peptide
Catalog # BP7408c

Specification

VRK1 Antibody (Center) Blocking Peptide - Product Information

Primary Accession Q99986

VRK1 Antibody (Center) Blocking Peptide - Additional Information

Gene ID 7443

Other Names
Serine/threonine-protein kinase VRK1, Vaccinia-related kinase 1, VRK1

Target/Specificity
The synthetic peptide is selected from the sequence of human VRK1 within aa 300-400.

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.

VRK1 Antibody (Center) Blocking Peptide - Protein Information

Name VRK1 {ECO:0000303|PubMed:9344656, ECO:0000312|HGNC:HGNC:12718}

Function
Serine/threonine kinase involved in cell cycle, nuclear condensation and transcription regulation (PubMed:14645249, PubMed:18617507, PubMed:19103756). Involved in Golgi disassembly during the cell cycle: following phosphorylation by PLK3 during mitosis, required to induce Golgi fragmentation (PubMed:19103756). Phosphorylates 'Thr-18' of p53/TP53 and may thereby prevent the interaction between p53/TP53 and MDM2 (PubMed:10951572). Phosphorylates KAT5 in response to DNA damage, promoting KAT5 association with chromatin and histone acetyltransferase activity (PubMed:33076429). Phosphorylates BANF1: disrupts its ability to bind DNA, reduces its binding to LEM domain-containing proteins and causes its relocalization from the nucleus to the cytoplasm (PubMed:16495336).

Phosphorylates ATF2 which activates its transcriptional activity (PubMed:15105425).

Cellular Location
Nucleus. Cytoplasm. Note=Dispersed throughout the cell but not located on mitotic spindle or chromatids during mitosis

Tissue Location
Widely expressed. Highly expressed in fetal liver, testis and thymus.

VRK1 Antibody (Center) Blocking Peptide - Protocols

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

- Blocking Peptides

VRK1 Antibody (Center) Blocking Peptide - Images

VRK1 Antibody (Center) Blocking Peptide - Background

This gene encodes a member of the vaccinia-related kinase (VRK) family of serine/threonine protein kinases. This gene is widely expressed in human tissues and has increased expression in actively dividing cells, such as those in testis, thymus, fetal liver, and carcinomas. Its protein localizes to the nucleus and has been shown to promote the stability and nuclear accumulation of a transcriptionally active p53 molecule and, in vitro, to phosphorylate Thr18 of p53 and reduce p53 ubiquitination. This gene, therefore, may regulate cell proliferation. This protein also phosphorylates histone, casein, and the transcription factors ATF2 (activating transcription factor 2) and c-JUN.

VRK1 Antibody (Center) Blocking Peptide - References

Blume-Jensen P, et al. Nature 2001. 411: 355.Cantrell D, J. Cell Sci. 2001. 114: 1439.Jhiang S Oncogene 2000. 19: 5590.Manning G, et al. Science 2002. 298: 1912.Moller, D, et al. Am. J. Physiol. 1994. 266: C351-C359.Robertson, S. et al. Trends Genet. 2000. 16: 368.Robinson D, et al. Oncogene 2000. 19: 5548.Van der Ven, P, et al. Hum. Molec. Genet. 1993. 2: 1889.Vanhaesebroeck, B, et al. Biochem. J. 2000. 346: 561.Van Weering D, et al. Recent Results Cancer Res. 1998. 154: 271.