

href="http://www.uniprot.org/citations/18286207" target="_blank">18286207, PubMed:20679487). Isoform 1 modulates the stress response to hypoxia and cytokines, such as interleukin-1 beta (IL1B) and this is dependent on its interaction with MAPK8IP1, which assembles mitogen-activated protein kinase (MAPK) complexes (PubMed:17709393). Inhibition of signal transmission mediated by the assembly of MAPK8IP1-MAPK complexes reduces JNK phosphorylation and JUN-dependent transcription (PubMed:18286207). Phosphorylates 'Thr-18' of p53/TP53, histone H3, and may also phosphorylate MAPK8IP1 (PubMed:16704422). Phosphorylates BANF1 and disrupts its ability to bind DNA and reduces its binding to LEM domain-containing proteins (PubMed:16495336). Down-regulates the transactivation of transcription induced by ERBB2, HRAS, BRAF, and MEK1 (PubMed:20679487). Blocks the phosphorylation of ERK in response to ERBB2 and HRAS (PubMed:20679487). Can also phosphorylate the following substrates that are commonly used to establish in vitro kinase activity: casein, MBP and histone H2B, but it is not sure that this is physiologically relevant (PubMed:14645249).

Cellular Location

[Isoform 1]: Cytoplasm. Endoplasmic reticulum membrane; Single-pass type IV membrane protein. Mitochondrion membrane; Single-pass type IV membrane protein. Nucleus envelope {ECO:0000250|UniProtKB:Q8BN21}

Tissue Location

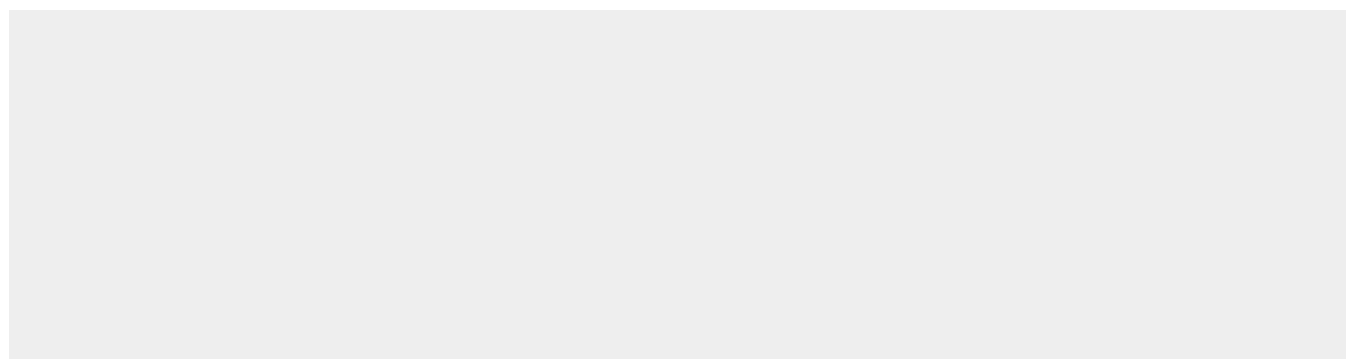
Isoform 1 and isoform 2 are expressed in various tumor cell lines. Expression of isoform 1 inversely correlates with ERBB2 in breast carcinomas (at protein level). Widely expressed. Highly expressed in fetal liver, skeletal muscle, pancreas, heart, peripheral blood leukocytes and testis.

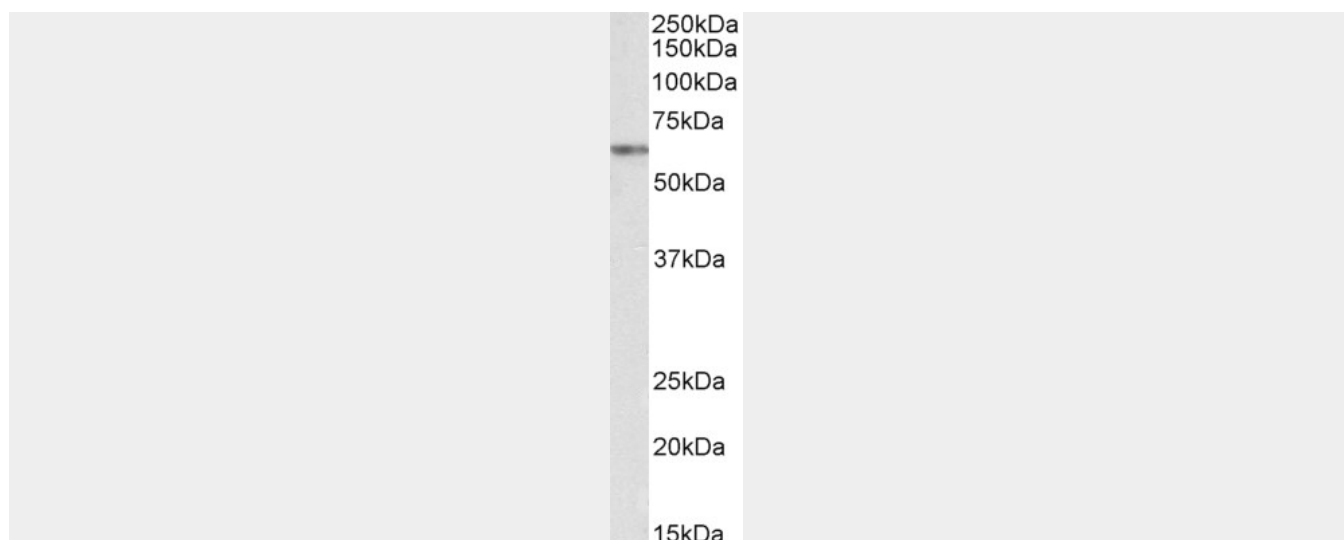
VRK2 Antibody (internal region) - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

VRK2 Antibody (internal region) - Images





AF2995a (2 µg/ml) staining of K562 nuclear lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

VRK2 Antibody (internal region) - Background

This antibody is expected to recognize all isoforms (NP_001123952.1, NP_001123954.1, NP_001123955.1, NP_001129499.1). Reported variants represent identical protein: NP_001123953.1, NP_006287.2.

VRK2 Antibody (internal region) - References

Proteomics identification of nuclear Ran GTPase as an inhibitor of human VRK1 and VRK2 (vaccinia-related kinase) activities. Sanz-García M, López-Sánchez I, Lazo PA. Molecular & cellular proteomics : MCP 2008 Nov 7 (11): 2199-214. PMID: 18617507