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Anti-VRK3 Antibody

Catalog # AP61120

Product Information

Application	WB, IHC
Primary Accession	Q8IV63
Reactivity	Human, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	52881

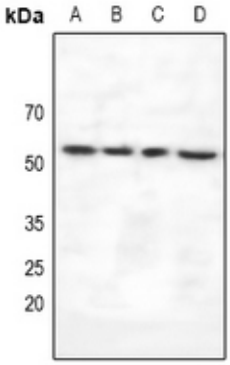
Additional Information

Gene ID	51231
Other Names	Inactive serine/threonine-protein kinase VRK3; Serine/threonine-protein pseudokinase VRK3; Vaccinia-related kinase 3
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the center region of human VRK3. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000) IHC~~1:100~500
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

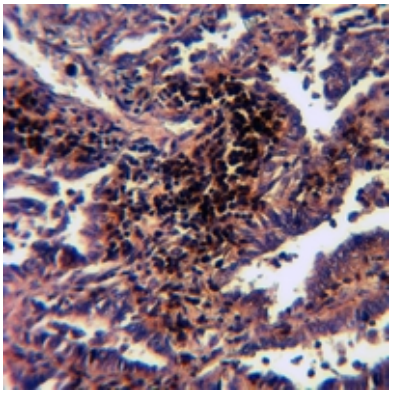
Protein Information

Name	VRK3
Function	Plays a role in the regulation of the cell cycle by phosphorylating the nuclear envelope protein barrier-to-autointegration factor/BAF that is required for disassembly and reassembly, respectively, of the nuclear envelope during mitosis (PubMed:25899223). Under normal physiological conditions, negatively regulates ERK activity along with VHR/DUSP3 phosphatase in the nucleus, causing timely and transient action of ERK. Stress conditions activate CDK5 which phosphorylates VRK3 to increase VHR phosphatase activity and suppress prolonged ERK activation that causes cell death (PubMed:27346674). For example, upon glutamate induction, promotes nuclear localization of HSP70/HSPA1A to inhibit ERK activation via VHR/DUSP3 phosphatase (PubMed:27941812).
Cellular Location	Nucleus. Cytoplasm. Note=Under oxidative stress, migrates from the nucleus to the cytoplasm.

Images



Western blot analysis of VRK3 expression in HEK293T (A), A549 (B), U87MG (C), rat liver (D) whole cell lysates. (Predicted band size: 52 kD; Observed band size: 53 kD)



Immunohistochemical analysis of VRK3 staining in human lung cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

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