

VRK3 Polyclonal Antibody

Catalog # AP73076

Product Information

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

Additional Information

Gene ID	51231
Other Names	VRK3; Inactive serine/threonine-protein kinase VRK3; Serine/threonine-protein pseudokinase VRK3; Vaccinia-related kinase 3
Dilution	WB~~Western Blot: 1/500 - 1/2000. ELISA: 1/40000. Not yet tested in other applications. E~~N/A
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.
Storage Conditions	-20°C

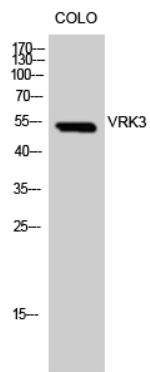
Protein Information

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.

Background

Inactive kinase that suppresses ERK activity by promoting phosphatase activity of DUSP3 which specifically dephosphorylates and inactivates ERK in the nucleus.

Images



Western Blot analysis of COLO cells using VRK3 Polyclonal Antibody. Secondary antibody was diluted at 1:20000 cells nucleus extracted by Minute TM Cytoplasmic and Nuclear Fractionation kit (SC-003, Inventbiotech, MN, USA).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.