Human VRK1 Antibody

Monoclonal Mouse IgG_1 Clone # 1F6

Catalog Number: MAB5835

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human VRK1 in Western blots.
Source	Monoclonal Mouse IgG_1 Clone # 1F6
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E. coli*-derived recombinant human VRK1 Met1-Lys396 Accession # Q99986
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

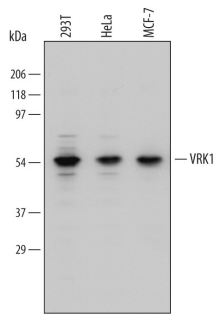
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Immunocytochemistry	5-15 µg/mL	See Below
Immunohistochemistry	1-25 µg/mL	See Below

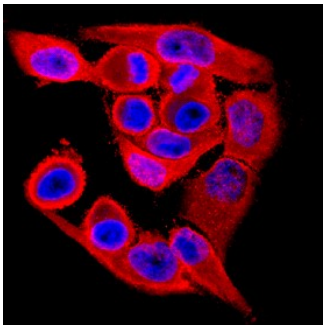
DATA

Western Blot



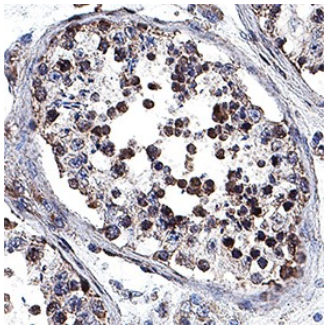
Detection of Human VRK1 by Western Blot. Western blot shows lysates of 293T human embryonic kidney cell line, HeLa human cervical epithelial carcinoma cell line, and MCF-7 human breast cancer cell line. PVDF membrane was probed with 1 µg/mL of Mouse Anti-Human VRK1 Monoclonal Antibody (Catalog # MAB5835) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). A specific band was detected for VRK1 at approximately 54 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunocytochemistry



VRK1 in HeLa Human Cell Line. VRK1 was detected in immersion fixed HeLa human cervical epithelial carcinoma cell line using Mouse Anti-Human VRK1 Monoclonal Antibody (Catalog # MAB5835) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.

Immunohistochemistry



VRK1 in Human Testis. VRK1 was detected in immersion fixed paraffin-embedded sections of human testis using Mouse Anti-Human VRK1 Monoclonal Antibody (Catalog # MAB5835) at 1.7 µg/mL for 1 hour at room temperature followed by incubation with the Anti-Mouse IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC001). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to cytoplasm and nuclei of sperm cells. View our protocol for IHC Staining with VisUCyte HRP Polymer Detection Reagents.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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BACKGROUND

Vaccinia-related kinase 1 (VRK1; also serine/threonine-protein kinase VRK1) is a 45 kDa member of the protein kinase superfamily, the CK1 Serine/Threonine protein kinase family, and the VRK subfamily. Human VRK1 is 396 amino acids (aa) in length, and contains one protein kinase domain (aa 37-317). Human VRK1 shares 91% and 78% aa sequence identity with bovine and mouse VRK1, respectively. VRK1 is widely expressed with high expression in fetal liver, testis and thymus. VRK1 functions as a serine/threonine kinase that phosphorylates Thr-18 of p53/TP53 and may thereby prevent the interaction between p53/TP53 and MDM2.

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