

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human HIPK2 in direct ELISAs.
<b>Source</b>	Monoclonal Mouse IgG <sub>1</sub> Clone # 493918
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human HIPK2 Met765-Ser924 Accession # Q9H2X6
<b>Formulation</b>	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.

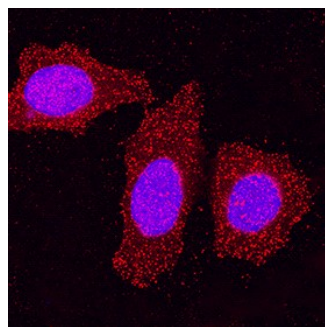
## APPLICATIONS

**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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Immunocytochemistry</b>	5-25 µg/mL	See Below

## DATA

### Immunocytochemistry



**HIPK2 in MCF-7 Human Cell Line.** HIPK2 was detected in immersion fixed MCF-7 human breast cancer cell line using Mouse Anti-Human HIPK2 Monoclonal Antibody (Catalog # MAB9307) at 8 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 and nuclei. View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.5 mg/mL in sterile PBS.
<b>Shipping</b>	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
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## BACKGROUND

Homeodomain-interacting protein kinase-2 (HIPK2) is a serine/threonine kinase which interacts with transcription factors, including p53, CREB1, SMAD1, SMAD2, RUNX1 and others, and can act as a corepressor or coactivator depending on the transcription factor and subcellular localization. Post-translational modifications control HIPK2 activity, including phosphorylation, small ubiquitin-like modifier modification, acetylation, and ubiquitination. HIPK2 regulation of cell proliferation makes it a key effector of proliferative diseases including cancer and kidney fibrosis. For example, HIPK2 can repress the proliferative Wnt-1/b-catenin pathway and HIF-1, promote apoptosis by activation of p53 and repression of ΔNp63α, MDM2 and CtBP, and its activity is enhanced by anti-cancer drugs such as cisplatin and etoposide. HIPK2 oncorepression can be blocked by cytoplasmic localization, hypoxia, gene mutation and loss of heterozygosity.

## References:

(Saul VV and Schmitz ML, J Mol Med (Berl). 2013 Sep;91(9):1051-8.) (Saul VV and Schmitz ML, J Mol Med (Berl). 2013 Sep;91(9):1051-8.) (D'Orazi G, et al, J Exp Clin Cancer Res. 2012 Aug 13;31:63.)