

## DESCRIPTION

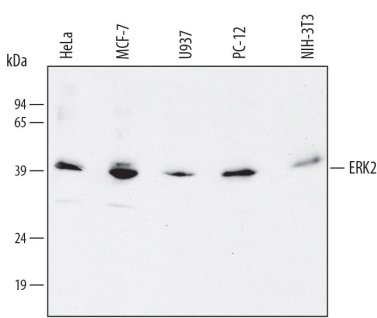
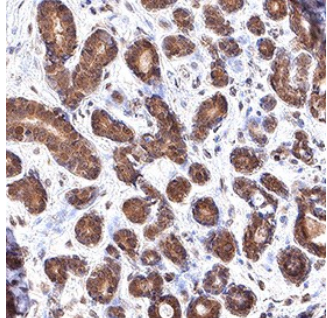
<b>Species Reactivity</b>	Human/Mouse/Rat
<b>Specificity</b>	Detects human, mouse, and rat ERK2. Also recognizes ERK1 in some cell types at much lower affinity.
<b>Source</b>	Polyclonal Rabbit IgG
<b>Purification</b>	Antigen and protein A Affinity-purified
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human ERK2 Met1-Ser360 Accession # P28482
<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 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
<b>Western Blot</b>	0.1 µg/mL	See Below
<b>Immunohistochemistry</b>	3-15 µg/mL	See Below

## DATA

<p><b>Western Blot</b></p> 	<p><b>Detection of Human/Mouse/Rat ERK2 by Western Blot.</b> Western blot shows lysates of HeLa human cervical epithelial carcinoma cell line, MCF-7 human breast cancer cell line, U937 human histiocytic lymphoma cell line, PC-12 rat adrenal pheochromocytoma cell line, and NIH-3T3 mouse embryonic fibroblast cell line. PVDF membrane was probed with 0.1 µg/mL of Rabbit Anti-Human/Mouse/Rat ERK2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1230) followed by HRP-conjugated Anti-Rabbit IgG Secondary Antibody (Catalog # HAF008). A specific band was detected for ERK2 at approximately 42 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.</p>	<p><b>Immunohistochemistry</b></p>  <p><b>ERK2 in Human Breast.</b> ERK2 was detected in immersion fixed paraffin-embedded sections of human breast using Rabbit Anti-Human/Mouse/Rat ERK2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1230) at 3 µg/mL for 1 hour at room temperature followed by incubation with the Anti-Rabbit IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC003). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to cytoplasm in epithelial cells. View our protocol for <a href="#">IHC Staining with VisUCyte HRP Polymer Detection Reagents</a>.</p>
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## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.2 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

ERK1 and ERK2 (also known as MAPK3 and MAPK1) are 44- and 42-kDa Ser/Thr kinases, respectively. They are part of the Ras-Raf-ERK signal transduction cascade often found downstream of growth factor receptor activation. ERK1 and ERK2 were initially isolated and cloned as kinases activated in response to insulin and NGF. They are expressed in most, if not all, mammalian tissues. Dual threonine and tyrosine phosphorylation activate both ERKs, at Thr202/Tyr204 for human ERK1 and Thr185/Tyr187 for human ERK2. Within the range used as an immunogen, human, mouse, and rat ERK1 share 100% amino acid sequence identity.