

DESCRIPTION

Species Reactivity	Human/Mouse/Rat
Specificity	Detects human, mouse, and rat ERK1/ERK2 in Western blots.
Source	Monoclonal Mouse IgG ₁ Clone # 216703
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human ERK1 Met1-Pro379 Accession # P27361
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.

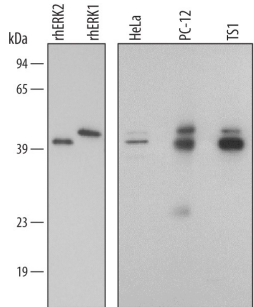
APPLICATIONS

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	0.5 µg/mL	See Below
Immunohistochemistry	8-25 µg/mL	See Below

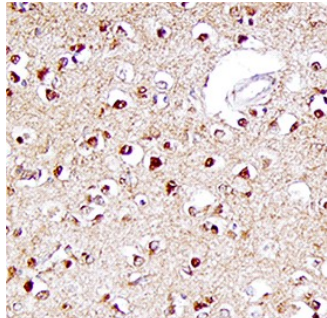
DATA

Western Blot



Detection of Human/Mouse/Rat ERK1/ERK2 by Western Blot. Western blot shows lysates of HeLa human cervical epithelial carcinoma cell line, PC-12 rat adrenal pheochromocytoma cell line, and TS1 mouse helper T cell line. PVDF membrane was probed with 0.5 µg/mL Mouse Anti-Human/Mouse/Rat ERK1/ERK2 Monoclonal Antibody (Catalog # MAB1576) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). For additional reference, recombinant human ERK1 and ERK2 (2 ng/lane) were included. A specific band for ERK1/ERK2 was detected at approximately 44/42 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 4.

Immunohistochemistry



ERK1/ERK2 in Human Brain. ERK1/ERK2 was detected in immersion fixed paraffin-embedded sections of human brain (cortex) using Mouse Anti-Human/Mouse/Rat ERK1/ERK2 Monoclonal Antibody (Catalog # MAB1576) at 15 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Mouse HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS002) and counterstained with hematoxylin (blue). Specific staining was localized to neuronal cell bodies. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

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. <ul style="list-style-type: none"> 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.

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 activates both ERKs, at Thr202/Tyr204 for human ERK1 and Thr185/Tyr187 for human ERK2. The two proteins share 83% amino acid identity, differing mainly at the N and C termini.