

DESCRIPTION

Species Reactivity	Human/Mouse/Rat
Specificity	Detects human, mouse, and rat MEK1 in Western blots.
Source	Monoclonal Mouse IgG _{2B} Clone # 239416
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human MEK1 Met1-Val393 (Ser218Asp, Ser222Asp) Accession # Q02750
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 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
Immunocytochemistry	8-25 µg/mL	See Below
Simple Western	5 µg/mL	See Below

DATA

Western Blot

Detection of Human/Mouse/Rat MEK1 by Western Blot. Western blot shows lysates of MCF-7 human breast cancer cell line, U937 human histiocytic lymphoma cell line, and HepG2 human hepatocellular carcinoma cell line. PVDF membrane was probed with 0.5 µg/mL Mouse Anti-Human/Mouse/Rat MEK1 Monoclonal Antibody (Catalog # MAB2678) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). For additional reference, recombinant human MEK1 and Recombinant Human Active MEK2 (Catalog # 2855-KS) (5 ng/lane) were included. A specific band for MEK1 was detected at approximately 45 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 3.

Simple Western

Detection of Human MEK1 by Simple Western™. Simple Western lane view shows lysates of HepG2 human hepatocellular carcinoma cell line, loaded at 0.5 mg/mL. A specific band was detected for MEK1 at approximately 53 kDa (as indicated) using 5 µg/mL of Mouse Anti-Human/Mouse/Rat MEK1 Monoclonal Antibody (Catalog # MAB2678). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.

Immunocytochemistry

MEK1 in HeLa Human Cell Line. MEK1 was detected in immersion fixed HeLa human cervical epithelial carcinoma cell line using Mouse Anti-Human/Mouse/Rat MEK1 Monoclonal Antibody (Catalog # MAB2678) at 3 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

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

Mitogen-Activated Protein Kinase Kinase 1 (MEK1 or MKK1) and MEK2 (MKK2) belong to the STE family of kinases. Both are dual-specificity kinases, phosphorylating and activating the mitogen-activated protein kinases ERK1 and ERK2 at T and Y positions within the phosphoacceptor sequence T-E-Y. Activation by Raf occurs through phosphorylation at S218 and S222 of MEK1, and S222 and S226 of MEK2.