Human/Mouse/Rat p38α Antibody

Monoclonal Mouse IgG_{2B} Clone # 142102

Catalog Number: MAB869

DESCRIPTION

Species Reactivity	Human/Mouse/Rat
Specificity	Detects human, mouse, and rat p38α. This antibody does not detect recombinant p38β, p38γ or p38δ.
Source	Monoclonal Mouse IgG_{2B} Clone # 142102
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E. coli*-derived recombinant human p38α Accession # Q16539
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.

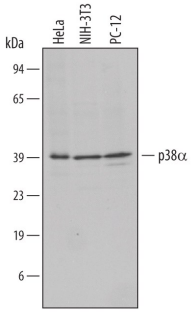
APPLICATIONS

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
Knockout Validated	p38α is specifically detected in HEK293T human embryonic kidney parental cell line but is not detectable in p38α knockout HEK293T cell line.	

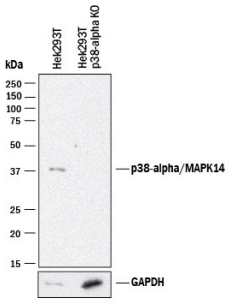
DATA

Western Blot



Detection of Human/Mouse/Rat p38α by Western Blot. Western blot shows lysates of HeLa human cervical epithelial carcinoma cell line, NIH-3T3 mouse embryonic fibroblast cell line, and PC-12 rat adrenal pheochromocytoma cell line. PVDF membrane was probed with 1 µg/mL of Human/Mouse/Rat p38α Monoclonal Antibody (Catalog # MAB869) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). A specific band was detected for p38α at approximately 38 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 4.

Knockout Validated



Western Blot Shows Human p38α Specificity by Using Knockout Cell Line. Western blot shows lysates of HEK293T human embryonic kidney parental cell line and p38α knockout HEK293T cell line (KO). PVDF membrane was probed with 1 µg/mL of Mouse Anti-Human/Mouse/Rat p38α Monoclonal Antibody (Catalog # MAB869) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for p38α at approximately 38 kDa (as indicated) in the parental HEK293T cell line, but is not detectable in knockout HEK293T cell line. GAPDH (Catalog # MAB5718) is shown as a loading control. This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

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.

BACKGROUND

p38α (also known as MAPK14 or SAPK2A) is a member of the p38 MAPK family which are activated by various environmental stresses and pro-inflammatory cytokines (1). The activation of p38 requires its phosphorylation by MAP kinase kinases (MKKs) or its autophosphorylation triggered by the interaction of MAP3K7IP1/TAB1 protein with this kinase (2). The substrates of p38 include transcription regulator ATF2, MEF2C, MAX, cell cycle regulator CDC25B, and tumor suppressor p53, which suggest the roles of this kinase in stress related transcription and cell cycle regulation, as well as in genotoxic stress response.

References:

1. Han, J. *et al.* (1994) Science **265**:808.
2. Ge, B. *et al.* (2002) Science **295**:1291.

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