

DESCRIPTION

Species Reactivity	Human
Specificity	Detects endogenous human p38δ. Mouse and rat p38δ reactivity has not been demonstrated but is likely due to their high homology with human p38δ. This antibody does not detect recombinant p38α, p38β or p38γ in Western blots.
Source	Polyclonal Rabbit IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human p38δ Accession # O15264
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	0.1 μg/mL	See Below
Immunohistochemistry	5-15 μg/mL	See Below

DATA

Western Blot

Detection of Human p38δ by Western Blot. Western blot shows lysates of HEK293 human embryonic kidney cell line and HepG2 human hepatocellular carcinoma cell line. PVDF membrane was probed with 0.1 μg/mL Rabbit Anti-Human p38δ Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1519) followed by HRP-conjugated Anti-Rabbit IgG Secondary Antibody (Catalog # HAF008). For additional reference, recombinant p38β, p38γ, p38δ, and p38α at 2 ng/lane were included. A specific band for p38 delta was detected at approximately 42 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunohistochemistry

p38δ in Human Skin. p38δ was detected in immersion fixed paraffin-embedded sections of human skin using 15 μg/mL Rabbit Anti-Human p38δ Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1519) overnight at 4 °C. Tissue was stained with the Anti-Rabbit HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS005) and counterstained with hematoxylin (blue). View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

Immunohistochemistry

p38δ in Human Skin. p38δ was detected in immersion fixed paraffin-embedded sections of human skin using Rabbit Anti-Human p38δ Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1519) at 15 μg/mL overnight at 4 °C. Tissue was stained using the Anti-Rabbit HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS005) and counterstained with hematoxylin (blue). Lower panel shows a lack of labeling if primary antibodies are omitted and tissue is stained only with secondary antibody followed by incubation with detection reagents. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 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

The p38 Mitogen-activated Protein Kinases (MAPKs) are a family of four related Ser/Thr kinases activated by proinflammatory cytokines and environmental stresses. All four p38 family members, alpha, beta, gamma, and delta, are phosphorylated by MKK3 and/or MKK6 at dual Thr and Tyr positions within the phosphoacceptor sequence Thr-Gly-Tyr. Once activated, p38 phosphorylates a number of targets, including the nuclear transcription factors ATF2 and Max.

The most frequently analyzed family member, p38 alpha, also known as SAPK2a and MAPK14, was initially purified as a kinase critical to the signaling cascade linking IL-1 to MAPKAPK-2 and the small heat shock protein HSP27. Ubiquitously expressed, p38 alpha is dually phosphorylated by MKK3 and MKK6 at Thr180 and Tyr182. Once activated, p38 alpha phosphorylates a number of targets, including the cytoplasmic kinases MNK 4 and PRAK5 and the nuclear transcription factors ATF2 1 and STAT1. Several promising compounds that inhibit p38 alpha are being investigated as potential therapies for arthritic and inflammatory diseases.