



Product Specification Sheet

**Mitogen-activated protein kinase 1 antibody**

Cat # MAPK1-A  
Cat # MAPK1-C

Rabbit Anti-Human MAPK8/ERK-2 antibody  
Recombinant Human MAPK1 protein control for Western blotting

**SIZE:** 100 µg  
**SIZE:** 100 µl

Mitogen activated protein kinase 1, also known as MAPK1, ERK, or ERK2, is an integral component of the MAP kinase cascade that regulates cell growth and differentiation. The MAPK/ERK cascade plays also a role in initiation and regulation of meiosis, mitosis, and postmitotic functions in differentiated cells by phosphorylating several transcription factors. ERK1 and ERK2 are activated by MEK1 and MEK2 in the B-raf signaling pathway resulting in its translocation to the nucleus where it phosphorylates nuclear targets. This phosphorylation causes dramatic conformational changes, which enable full activation and interaction of MAPK1/ERK2 with its substrates. Human ERK1 and ERK2 are 84% identical in sequence and share common functionality in cells. Anti-ERK2 antibody is ideal for investigators involved in Neuroscience, Cell Signaling and Cancer Research.

**Source of Antigen or Antibodies**

**Uniprot:** P28482

**Host:** Rabbit

**Clonality:** Polyclonal

**Immunogen:** Full length recombinant MAPK1

**Purification:** Ammonium sulfate followed by protein affinity purification

**Species Reactivity:** Human

**Cross reactivity:** MAPK1 is highly conserved across various species. The antibody is expected to cross-react with species in which <80% homology is observed.

**Subcellular Location:** Nuclear

**Recommended Secondary Antibody:** Goat anti-Rabbit IgG-HRP (ADI cat#20320)

**Negative Control:** Non-immune Rabbit IgG (ADI cat# 2009-1).

**MAPK1-C:** Contains a recombinant E.coli expressed full length human MAPK1 protein at a concentration of 5 ng/µl in Laemmli buffer (62.5 mM Tris-HCL, pH 6.8, 2% SDS, 10% glycerol, 5% BME, and 0.002% bromphenol blue). Heat for 5 minutes at 95°C then load 1-5 µl. Store at -20°C in suitable size aliquots, do not expose to multiple freeze/thaw cycles. **Note:** Due to the addition of tags, the protein appears slightly larger than native protein.

**Form & Storage of Antibodies**

**Affinity pure IgG Solution**

Concentration: 0.5 mg/ml      Volume: 200 µl  
Supplied in PBS, pH 7.4 + 0.1% BSA  
The antibody can be made available carrier free or conjugated to HRP, Biotin, or FITC on request

**Lyophilized powder**

Reconstitute powder in 200 µl distilled water to 0.5 mg/ml

**Storage:**

**Short-term:** 4°C for 1 month

**Long-term:** at -20°C or below in suitable aliquots after reconstitution for 1 year. Do not expose to multiple freeze/thaw cycles or store working, diluted solutions. Glycerol may be added to a final concentration of 50% and antibodies can be stored un-aliquoted at -20°C.

**Recommended Usage**

**ELISA:** Assay dependent concentration. Typically, between 0.1-2.0 µg/ml for capture/detection antibodies.

**Western Blotting:** 0.5-1.0 µg/ml  
Predicted band size: 41 kDa

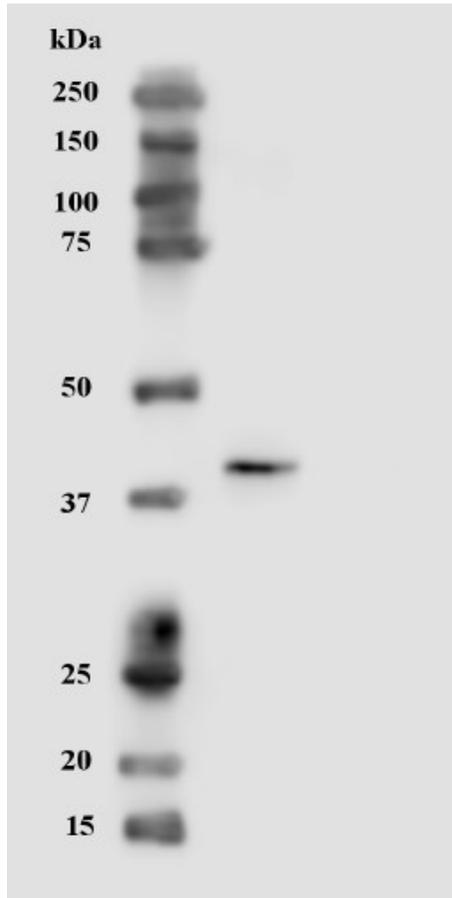
**IHC-P:** 1-10 µg/ml.

The above concentrations are a *suggestion*, user's must optimize their assay based on their own conditions. The antibody may work in other applications such as Immunocytochemistry or IP. These methods have not been tested by ADI.

*\*This product is for In vitro research use only.*

**Related materials available from ADI**

Catalog#	Description
BCL11-A	Rabbit Anti-Human BCL-2 antibody
BCL21-A	Rabbit Anti-Mouse BCL-2 antibody
BCL2-C	Recombinant BCL-2 control for Western blotting
HP5311-A	Rabbit anti-Human P53 antibody
HP5311-C	Recombinant Human P53 protein control for Western blotting
CASP3-A	Rabbit anti-Mouse Caspase 3 antibody
AKT1-A	Rabbit anti-Human AKT1 antibody
AKT1-C	Recombinant AKT1 control for Western blotting
PCNA11-A	1928011A



**Western blotting:** 5 ng of recombinant MAPK1 was heated for 5 minutes at 95°C then electrophoretically separated on a 10% SDS-PAGE gel. The gel was run at 100V for ~1 hour and 30 minutes then transferred to a 0.2  $\mu$ m nitrocellulose membrane using the 'Mixed MW' settings on a Transblot Turbo (Biorad). The blot was blocked for 1 hour at room temperature with 1% Casein. **MAPK11-A** was diluted with TBST+0.1% BSA to 1  $\mu$ g/ml and incubated overnight at 4°C. The blot was washed with TBS-T 3 times for 5 minutes each. Goat anti-rabbit IgG HRP (**ADI cat#20320**) was diluted in TBST+0.1% BSA at a 1:1,000 dilution (500 ng/ml) then incubated for 1 hour at room temperature. The blot was washed 3 times with TBS-T for 5 minutes each. The blot was then incubated with ECL substrate for 5 minutes and imaged on a CCD imaging system (C-DiGit, LI-COR).