

## Product datasheet for **CF500485**

### **ERK2 (MAPK1) Mouse Monoclonal Antibody [Clone ID: OTI4C2]**

#### **Product data:**

<b>Product Type:</b>	Primary Antibodies
<b>Clone Name:</b>	OTI4C2
<b>Applications:</b>	IF, IHC, IP, WB
<b>Recommended Dilution:</b>	WB 1:1000~2000, IHC 1:50, IF 1:50~100, IP 2ug/500ul
<b>Reactivity:</b>	Human, Monkey, Mouse, Rat, Dog
<b>Host:</b>	Mouse
<b>Isotype:</b>	IgG1
<b>Clonality:</b>	Monoclonal
<b>Immunogen:</b>	Full length human recombinant protein of human MAPK1(NP_620407) produced in HEK293T cell.
<b>Formulation:</b>	Lyophilized powder (original buffer 1X PBS, pH 7.3, 8% trehalose)
<b>Reconstitution Method:</b>	For reconstitution, we recommend adding 100uL distilled water to a final antibody concentration of about 1 mg/mL. To use this carrier-free antibody for conjugation experiment, we strongly recommend performing another round of desalting process. (OriGene recommends Zeba Spin Desalting Columns, 7KMWCO from Thermo Scientific)
<b>Purification:</b>	Purified from mouse ascites fluids or tissue culture supernatant by affinity chromatography (protein A/G)
<b>Storage:</b>	Store at -20°C as received.
<b>Stability:</b>	Stable for 12 months from date of receipt.
<b>Predicted Protein Size:</b>	41.4 kDa
<b>Gene Name:</b>	Homo sapiens mitogen-activated protein kinase 1 (MAPK1), transcript variant 2, mRNA.
<b>Database Link:</b>	<u><a href="#">NP_620407</a></u> <u><a href="#">Entrez Gene 26413</a></u> <u><a href="#">MouseEntrez Gene 116590</a></u> <u><a href="#">RatEntrez Gene 477575</a></u> <u><a href="#">DogEntrez Gene 698569</a></u> <u><a href="#">MonkeyEntrez Gene 5594</a></u> <u><a href="#">Human</a></u>



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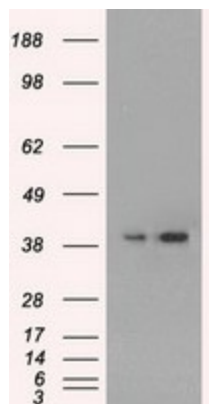
**Background:** The protein encoded by this gene is a member of the MAP kinase family. MAP kinases, also known as extracellular signal-regulated kinases (ERKs), act as an integration point for multiple biochemical signals, and are involved in a wide variety of cellular processes such as proliferation, differentiation, transcription regulation and development. The activation of this kinase requires its phosphorylation by upstream kinases. Upon activation, this kinase translocates to the nucleus of the stimulated cells, where it phosphorylates nuclear targets. Two alternatively spliced transcript variants encoding the same protein, but differing in the UTRs, have been reported for this gene.

**Synonyms:** ERK; ERK-2; ERK2; ERT1; MAPK2; p38; p40; p41; p41 mapk; p42-MAPK; P42MAPK; PRKM1; PRKM2

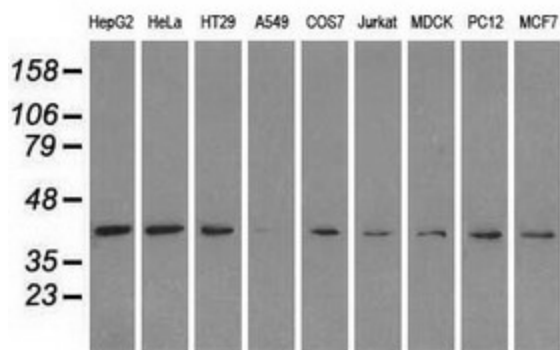
**Protein Families:** Druggable Genome, Protein Kinase

**Protein Pathways:** Acute myeloid leukemia, Adherens junction, Alzheimer's disease, Axon guidance, B cell receptor signaling pathway, Bladder cancer, Chemokine signaling pathway, Chronic myeloid leukemia, Colorectal cancer, Dorso-ventral axis formation, Endometrial cancer, ErbB signaling pathway, Fc epsilon RI signaling pathway, Fc gamma R-mediated phagocytosis, Focal adhesion, Gap junction, Glioma, GnRH signaling pathway, Insulin signaling pathway, Long-term depression, Long-term potentiation, MAPK signaling pathway, Melanogenesis, Melanoma, mTOR signaling pathway, Natural killer cell mediated cytotoxicity, Neurotrophin signaling pathway, NOD-like receptor signaling pathway, Non-small cell lung cancer, Oocyte meiosis, Pancreatic cancer, Pathways in cancer, Prion diseases, Progesterone-mediated oocyte maturation, Prostate cancer, Regulation of actin cytoskeleton, Renal cell carcinoma, T cell receptor signaling pathway, TGF-beta signaling pathway, Thyroid cancer, Toll-like receptor signaling pathway, Type II diabetes mellitus, Vascular smooth muscle contraction, VEGF signaling pathway

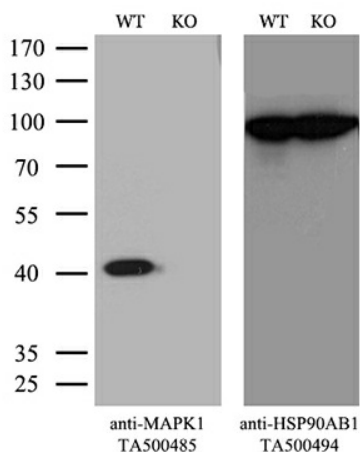
### Product images:



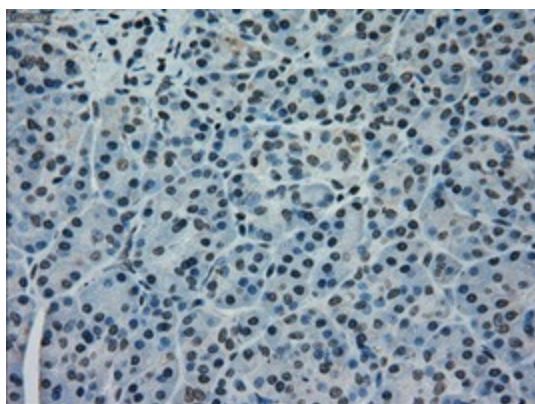
HEK293T cells were transfected with the pCMV6-ENTRY control (Left lane) or pCMV6-ENTRY MAPK1 ([RC204703], Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-MAPK1. Positive lysates [LY408481] (100ug) and [LC408481] (20ug) can be purchased separately from OriGene.



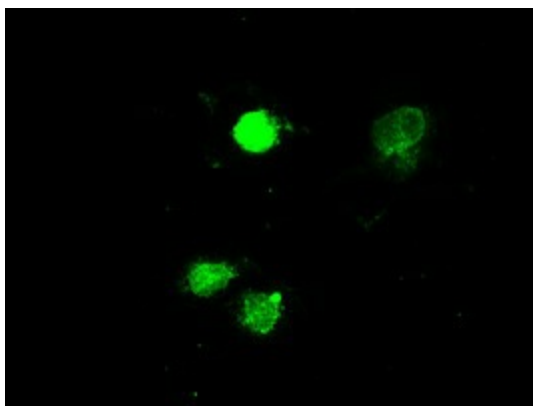
Western blot analysis of extracts (35ug) from 9 different cell lines by using anti-MAPK1 monoclonal antibody.



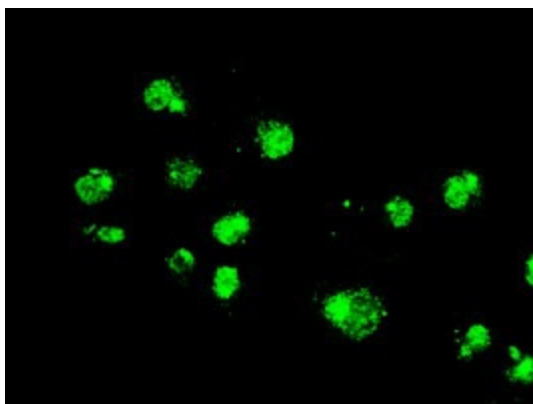
Equivalent amounts of cell lysates (10 ug per lane) of wild-type HeLa cells (WT, Cat# LC810HELA) and MAPK1-Knockout HeLa cells (KO, Cat# [LC810185]) were separated by SDS-PAGE and immunoblotted with anti-MAPK1 monoclonal antibody [TA500485]. Then the blotted membrane was stripped and reprobed with anti-HSP90AB1 antibody ([TA500494]) as a loading control (1:500).



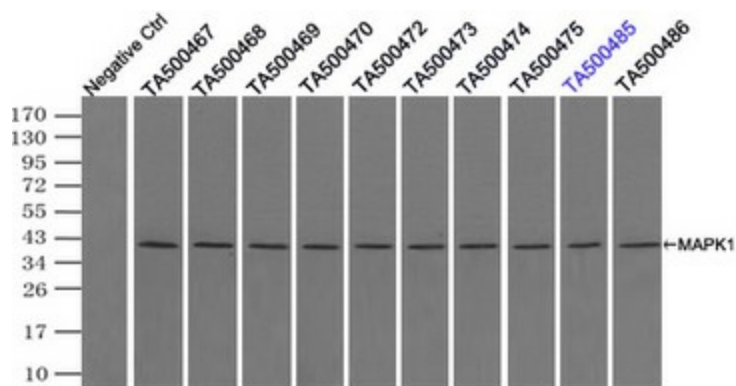
Immunohistochemical staining of paraffin-embedded Human pancreas tissue within the normal limits using anti-MAPK1 mouse monoclonal antibody. (Heat-induced epitope retrieval by 10mM citric buffer, pH6.0, 100°C for 10min, [TA500485])



Anti-MAPK1 mouse monoclonal antibody ([TA500485]) immunofluorescent staining of COS7 cells transiently transfected by pCMV6-ENTRY MAPK1 ([RC204703]).



Immunofluorescent staining of COS7 cells using anti-MAPK1 mouse monoclonal antibody ([TA500485]).



Immunoprecipitation (IP) of MAPK1 by using TrueMab monoclonal anti-MAPK1 antibodies (Negative control: IP without adding anti-MAPK1 antibody.). For each experiment, 500ul of DDK tagged MAPK1 overexpression lysates (at 1:5 dilution with HEK293T lysate), 2ug of anti-MAPK1 antibody and 20ul (0.1mg) of goat anti-mouse conjugated magnetic beads were mixed and incubated overnight. After extensive wash to remove any non-specific binding, the immunoprecipitated products were analyzed with rabbit anti-DDK polyclonal antibody.