

**Product Name: ERK1(5E9)Mouse Monoclonal Antibody**  
**Catalog #: AMM10600**



## Summary

<b>Production Name</b>	ERK1(5E9)Mouse Monoclonal Antibody
<b>Description</b>	Mouse Monoclonal Antibody
<b>Host</b>	Mouse
<b>Application</b>	IF-P,IF-F,ICC/IF,WB,IHC-P
<b>Reactivity</b>	Human,Rat,Mouse

## Performance

<b>Conjugation</b>	Unconjugated
<b>Modification</b>	Unmodified
<b>Isotype</b>	IgG
<b>Clonality</b>	Monoclonal
<b>Form</b>	Liquid
<b>Storage</b>	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.
<b>Buffer</b>	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.
<b>Purification</b>	Affinity purification

## Immunogen

<b>Gene Name</b>	MAPK3
<b>Alternative Names</b>	MAPK3
<b>Gene ID</b>	5594.0
<b>SwissProt ID</b>	P27361.Recombinant Protein of ERK1 of MAPK3

## Application

<b>Dilution Ratio</b>	WB 1:500-2000, IF-P/IF-F/ICC/IF 1:50-200, IHC-P 1:100-200
<b>Molecular Weight</b>	44kDa

## Background

The protein encoded by this gene is a member of the MAP kinase family. MAP kinases, also known as extracellular signal-

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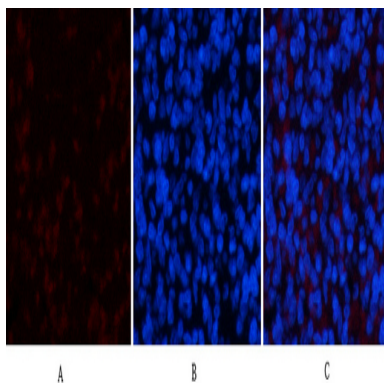


regulated kinases (ERKs), act in a signaling cascade that regulates various cellular processes such as proliferation, differentiation, and cell cycle progression in response to a variety of extracellular signals. This kinase is activated by upstream kinases, resulting in its translocation to the nucleus where it phosphorylates nuclear targets. Alternatively spliced transcript variants encoding different protein isoforms have been described. [provided by RefSeq, Jul 2008],catalytic activity:ATP + a protein = ADP + a phosphoprotein.,cofactor:Magnesium.,domain:The TXY motif contains the threonine and tyrosine residues whose phosphorylation activates the MAP kinases.,enzyme regulation:Activated by tyrosine phosphorylation in response to insulin and NGF.,function:Involved in both the initiation and regulation of meiosis, mitosis, and postmitotic functions in differentiated cells by phosphorylating a number of transcription factors such as ELK-1. Phosphorylates EIF4EBP1; required for initiation of translation. Phosphorylates microtubule-associated protein 2 (MAP2). Phosphorylates SPZ1 (By similarity). Phosphorylates heat shock factor protein 4 (HSF4),PTM:Dually phosphorylated on Thr-202 and Tyr-204, which activates the enzyme.,similarity:Belongs to the protein kinase superfamily.,similarity:Belongs to the protein kinase superfamily. CMGC Ser/Thr protein kinase family. MAP kinase subfamily.,similarity:Contains 1 protein kinase domain.,subunit:Interacts with MORG1 (By similarity). Binds to HIV-1 Nef. This interaction inhibits its kinase activity. Interacts with HSF4 and NISCH.,

## Research Area

MAPK\_ERK\_Growth;MAPK\_G\_Protein;ErbB\_HER;Chemokine;Oocyte meiosis;mTOR;Vascular smooth muscle contraction;Dorso-ventral axis formation;TGF-beta;Axon guidance;VEGF;Focal adhesion;Adherens\_Junction;Gap junction;Toll\_Like;NOD-like receptor;Natural killer cell mediated cytotoxicity;T\_Cell\_Receptor;B\_Cell\_Antigen;Fc epsilon RI;Fc gamma R-mediated phagocytosis;Long-term potentiation;Neurotrophin;Long-term depression;Regulates Actin and Cytoskeleton;Insulin\_Receptor;GnRH;Progesterone-mediated oocyte maturation;Melanogenesis;Type II diabetes mellitus;Aldosterone-regulated sodium reabsorption;Alzheimer's disease;Prion diseases;Pathways in cancer;Colorectal cancer;Renal cell carcinoma;Pancreatic cancer;Endometrial cancer;Glioma;Prostate cancer;Thyroid cancer;Melanoma;Bladder cancer;Chronic myeloid leukemia;Acute myeloid leukemia;Non-small cell lung cancer;

## Image Data

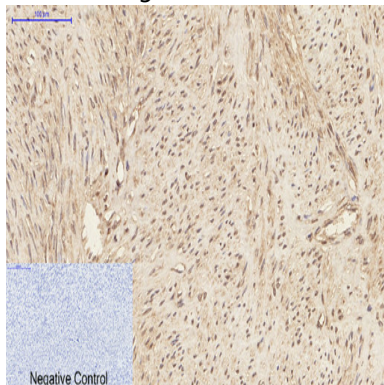


Immunofluorescence analysis of rat-spleen tissue. 1,ERK1 Mouse Monoclonal Antibody (5E9) (red) was diluted at 1:200 (4°C,overnight) . 2, Cy3 labeled Secondary antibody was diluted at 1:300 (room temperature, 50min) .3, Picture B:

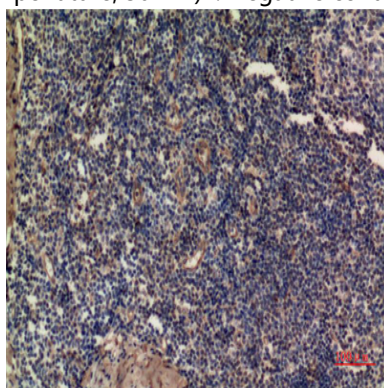
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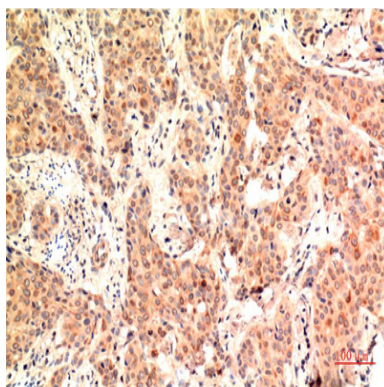
DAPI (blue) 10min. Picture A:Target. Picture B: DAPI. Picture C: merge of A+B



Immunohistochemical analysis of paraffin-embedded Human-uterus tissue. 1,ERK1 Mouse Monoclonal Antibody (5E9) was diluted at 1:200 (4°C,overnight) . 2, Sodium citrate pH 6.0 was used for antibody retrieval (>98°C,20min) . 3,Secondary antibody was diluted at 1:200 (room temperature, 30min) . Negative control was used by secondary antibody only.



Immunohistochemical analysis of paraffin-embedded Human Tonsil Tissue using ERK1 Mouse mAb diluted at 1:200.



Immunohistochemical analysis of paraffin-embedded Human Breast Carcinoma Tissue using ERK1 Mouse mAb diluted at 1:200.

## Note

For research use only.