



ERK5 Rabbit mAb

Catalog No	YP-rAb-17759
Isotype	IgG
Reactivity	Human,Mouse,Rat
Applications	WB,IF,IP,ELISA
Gene Name	MAPK7,ERK5
Protein Name	Mitogen-activated protein kinase 7
Purification Process	Protein A
Specificity	Endogenous
Formulation	PBS, 50% glycerol, 0.05% Proclin 300, 0.05%BSA
Source	Monoclonal, Rabbit,IgG
Dilution	WB 1:2000-1:10000; IF 1:200-1:1000; ELISA 1:5000-1:20000; IP 1:50-1:200;
Concentration	0.5 mg/ml
Purity	≥90%
Storage Stability	-15 ° C to -25 ° C/1 year(Do not lower than -25 ° C)
Synonyms	MAPK7 ; BMK1 ; ERK5 ; PRKM7 ; Mitogen-activated protein kinase 7 ; MAP kinase 7 ; MAPK 7 ; Big MAP kinase 1 ; BMK-1 ; Extracellular signal-regulated kinase 5 ; ERK-5
Observed Band	115kD
Calculated Molecular Weight	88kD
Cell Pathway	Cytoplasm, Nucleus
Tissue Specificity	Expressed in many adult tissues. Abundant in heart, placenta, lung, kidney and skeletal muscle. Not detectable in liver.
Function	Catalytic activity:ATP + a protein = ADP + a phosphoprotein.,cofactor:Magnesium.,domain:The second proline-rich region may interact with actin targeting the kinase to a specific location in the cell.,domain:The TXY motif contains the threonine and tyrosine residues whose phosphorylation activates the MAP kinases.,enzyme regulation:Activated by tyrosine and threonine phosphorylation (By similarity). Activated in response to hyperosmolarity, hydrogen peroxide, and epidermal growth factor (EGF).,Function:Plays a role in various cellular processes such as proliferation, differentiation and cell survival. The upstream activator of MAPK7 is the MAPK kinase MAP2K5. Upon activation, it translocates to the nucleus and phosphorylates various downstream targets including MEF2C. EGF activates





MAPK7 through a Ras-independent and MAP2K5-dependent pathway. May have a role in muscle cell differentiation. May be important for endothelial function and maintenance of blood vessel integrity. MAP2K5 and MAPK7 interact specifically with one another and not with MEK1/ERK1 or MEK2/ERK2 pathways.,PTM:Dually phosphorylated on Thr-219 and Tyr-221, which activates the enzyme (By similarity). Autophosphorylated in vitro on threonine and tyrosine residues when the C-terminal part of the kinase, which could have a regulatory role, is absent.,similarity:Belongs to the protein kinase superfamily. CMGC Ser/Thr protein kinase family. MAP kinase subfamily.,similarity:Contains 1 protein kinase domain.,subcellular location:Translocates to the nucleus upon activation.,subunit:Interacts with MAP2K5. Forms oligomers (By similarity). Interacts with MEF2A, MEF2C and MEF2D; the interaction phosphorylates the MEF2s and enhances transcriptional activity of MEF2A, MEF2C but not MEF2D.,tissue specificity:Expressed in many adult tissues. Abundant in heart, placenta, lung, kidney and skeletal muscle. Not detectable in liver.,

Background

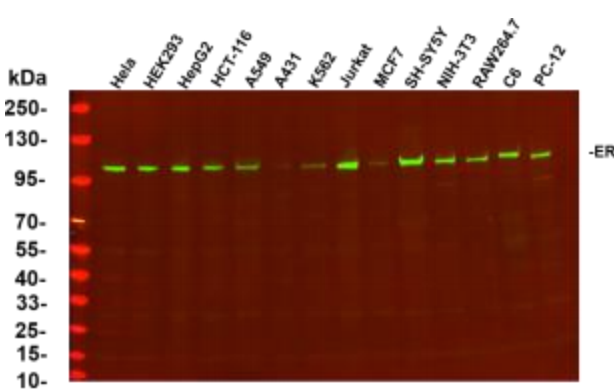
The protein encoded by this gene is a member of the MAP kinase family. MAP kinases act as an integration point for multiple biochemical signals, and are involved in a wide variety of cellular processes such as proliferation, differentiation, transcription regulation and development. This kinase is specifically activated by mitogen-activated protein kinase kinase 5 (MAP2K5/MEK5). It is involved in the downstream signaling processes of various receptor molecules including receptor type kinases, and G protein-coupled receptors. In response to extracellular signals, this kinase translocates to cell nucleus, where it regulates gene expression by phosphorylating, and activating different transcription factors. Four alternatively spliced transcript variants of this gene encoding two distinct isoforms have been reported. [provided by RefSeq, Jul 2008],

matters needing attention

Avoid repeated freezing and thawing!

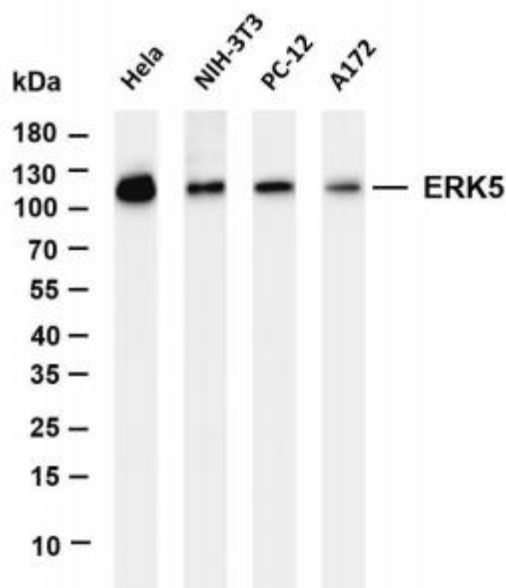
Usage suggestions

This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.

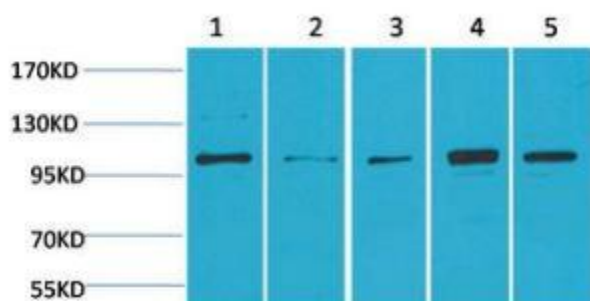


Various whole cell lysates were separated by 4-20% SDS-PAGE, and the primary antibody was used at 4 °C, over night with a 1:5000 dilution. The Dylight 800-conjugated Goat anti-Rabbit antibody

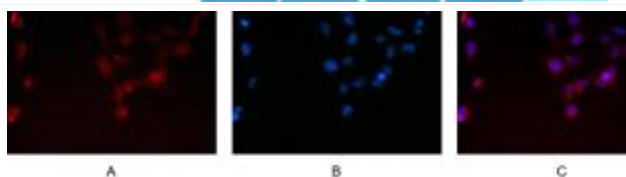




Various whole cell lysates were separated by 4-20% SDS-PAGE, and the membrane was blotted with anti-ERK5 antibody. The HRP-conjugated Goat anti-Rabbit IgG(H + L) antibody was used to detect the antibody. Lane 1: HeLa Lane 2: NIH-3T3 Lane 3: PC-12 Lane 4: A172 Predicted band size: 88kDa Observed band size: 115kDa



Western blot analysis of 1) HeLa, 2) 293T, 3) Mouse Skeletal Muscle, 4) Rat Kidney, 5) Rat Skeletal Muscle using ERK 5 Antibody. Secondary antibody(catalog#:



Immunofluorescence analysis of HEK293. Picture A: ERK5 antibody (red). Picture B: DAPI (blue). Picture C: Merge of A+B

