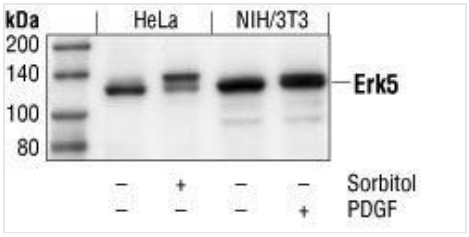
MAPK7 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	ERK5 (MAPK7), Polyclonal Antibody
Full Product Name	ERK5 (Extracellular Signal-regulated Kinase 5, ERK-5, Big MAP Kinase 1, BMK1, BMK-1, Mitogen-activated Protein Kinase 7, MAP Kinase 7, MAPK 7, MAPK7, PRKM7) (BSA & Azide Free)
Product Gene Name	anti-MAPK7 antibody
Product Synonym Names	Anti -ERK5 (Extracellular Signal-regulated Kinase 5, ERK-5, Big MAP Kinase 1, BMK1, BMK-1, Mitogen-activated Protein Kinase 7, MAP Kinase 7, MAPK 7, MAPK7, PRKM7) (BSA & Azide Free)
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human, Monkey, Mouse, Rat
Form/Format	Supplied as a liquid in PBS. No stabilizing proteins added. No preservative added. Also available with BSA & Azide. See E3452-59.
Purity/Purification	Affinity Purified Purified by protein A and immunoaffinity chromatography.
Specificity	Detects endogenous levels of total Erk5 protein. Does not crossreact with Erk1 or Erk2. Species Crossreactivity: Human, mouse, rat and monkey.
Preparation and Storage	May be stored at 4 degree C for short-term only. For long-term storage and to avoid repeated freezing and thawing, add sterile glycerol (40-50%), aliquot and store at -20 degree C. Aliquots are stable for at least 12 months at -20 degree C. For maximum recovery of product, centrifuge the original vial after thawing and prior to removing the cap. Further dilutions can be made in assay buffer.
Molecular Weight	88,386 Da
Chromosome Location	Chromosome: 17; NC_000017.10 (19281034..19286857). Location: 17p11.2
OMIM	602521
3D Structure	ModBase 3D Structure for Q13164
Immunogen	Synthetic peptide (KLH coupled) corresponding to carboxy-terminal residues of human Erk5
Product Categories/Family for anti-MAPK7 antibody	Antibodies; Abs to Protein Kinases
Applications Tested/Suitable for anti-MAPK7 antibody	Western Blot (WB), Immunoprecipitation (IP)
Application Notes for anti-MAPK7 antibody	Suitable for use in Western Blot and Immunoprecipitation. Dilution: Western Blot: 1:1000 Immunoprecipitation: 1:25
Related Product Information for anti-MAPK7 antibody	Erk5, also known as BMK1 (big mitogen-activated kinase 1), has a TEY motif in the activation loop similar to Erk1/2, and shares high homology in the amino-terminal kinase domain with Erk1/2. However, the long carboxy-terminal domain makes Erk5 a unique MAP kinase. Erk5 is activated by a wide variety of extracellular signals, including tyrosine receptor kinases, G-protein-coupled receptors as well as osmotic and oxidative stress (1,2). The direct upstream kinase of Erk5 is defined as MEK5 (1). MEKK2, MEKK3 and Tpl-2 are all able to activate MEK5, depending on stimulus or cell background (3-5). Growing evidence indicates that the Erk5 pathway is involved in proliferation/differentiation regulation, oncogenesis and neuronal development (1,6-8).

Other Notes	Small volumes of anti-MAPK7 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for MAPK7 purchase	MBS610610 is an antibody targeting MAPK7. Also known as ERK5 (Extracellular Signal-regulated Kinase 5, ERK-5, Big MAP Kinase 1, BMK1, BMK-1, Mitogen-activated Protein Kinase 7, MAP Kinase 7, MAPK 7, MAPK7, PRKM7) (BSA & Azide Free). Reactive in Human, Monkey, Mouse, Rat. Host: Rabbit.



Western Blot (WB) of anti-MAPK7 antibody
Western blot analysis of extracts from HeLa cells, untreated or sorbitol-treated, and NIH/3T3 cells, untreated or PDGF-treated, using Erk5 Antibody.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for MAPK7. It may not necessarily be applicable to this product.

NCBI GI #	837261
NCBI GeneID	5598
UniProt Primary Accession #	Q13164
UniProt Secondary Accession #	Q16634; Q59F50; Q6QLU7; Q7L4P4; Q969G1; Q96G51
UniProt Related Accession #	Q13164
NCBI Official Full Name	ERK5
NCBI Official Synonym Full Names	mitogen-activated protein kinase 7
NCBI Official Symbol	MAPK7
NCBI Official Synonym Symbols	BMK1; ERK4; ERK5; PRKM7
UniProt Protein Name	Mitogen-activated protein kinase 7
UniProt Synonym Protein Names	Big MAP kinase 1; BMK-1; Extracellular signal-regulated kinase 5
UniProt Gene Name	MAPK7
UniProt Synonym Gene Names	BMK1; ERK5; PRKM7
UniProt Entry Name	MK07_HUMAN
NCBI Protein Information	mitogen-activated protein kinase 7; BMK-1; ERK-5; MAPK 7; BMK1 kinase; MAP kinase 7; big MAP kinase 1; OTTHUMP00000065906; OTTHUMP00000065907; extracellular signal-regulated kinase 5; extracellular-signal-regulated kinase 5
NCBI Summary for MAPK7	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 extracelluar 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]

UniProt Comments for MAPK7	ERK5: a protein kinase of the MAPK family. Phosphorylated and activated by MEK5. Involved in the signaling processes downstream of various receptors including receptor tyrosine kinases and G protein-coupled receptors. Translocates to cell nucleus in response to extracelluar signals, where it regulates gene expression by phosphorylating various transcription factors. Mouse knockout shows a role in development and integrity of blood vessels. May block apoptosis in endothelial cells. Required for transduction of EGF growth signal, constitutively activated in ErbB2-overexpressing breast cancer, and downstream of activated Mek5 in metastatic prostate cancerFour alternatively spliced transcript variants of this gene encoding two distinct isoforms have been reported. Protein type: Kinase, protein; EC 2.7.11.24; Protein kinase, Ser/Thr (non-receptor); Protein kinase, CMGC; CMGC group; MAPK family; ERK subfamily; MAPK/ERK subfamily Chromosomal Location of Human Ortholog: 17p11.2 Cellular Component: nucleoplasm; PML body; cytoplasm; nucleus; cytosol Molecular Function: MAP kinase activity; protein binding; mitogen-activated protein kinase binding; ATP binding Biological Process: negative regulation of cAMP catabolic process; nerve growth factor receptor signaling pathway; stress-activated MAPK cascade; toll-like receptor 3 signaling pathway; signal transduction; positive regulation of protein metabolic process; toll-like receptor 10 signaling pathway; toll-like receptor 5 signaling pathway; cAMP-mediated signaling; cell differentiation; toll-like receptor 4 signaling pathway; negative regulation of heterotypic cell-cell adhesion; MyD88-independent toll-like receptor signaling pathway; negative regulation of NFAT protein import into nucleus; cell cycle; regulation of angiogenesis; toll-like receptor 2 signaling pathway; MyD88-dependent toll-like receptor signaling pathway; peptidyl-serine phosphorylation; negative regulation of inflammatory response; toll-like receptor signaling pathway; innate immune response; positive regulation of transcription from RNA polymerase II promoter; toll-like receptor 9 signaling pathway; negative regulation of cyclic-nucleotide phosphodiesterase activity
Research Articles on MAPK7	**1.** MEK5 activation by laminar shear stress inhibits inflammatory responses in microvascular endothelial cells, in part through ERK5-dependent induction of KLF4
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