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ERK5 Antibody

Rabbit mAb
Catalog # AP90868

Product Information

Application	WB, IF, FC, ICC, IP
Primary Accession	Q13164
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Other Names	Big MAP kinase 1; BMK 1; BMK 1 kinase; BMK-1; BMK1; BMK1 Kinase; ERK 4; ERK 5; ERK-5; ERK4; ERK5; MAP kinase 7; MAPK 7; Mitogen Activated Protein Kinase;
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	88386

Additional Information

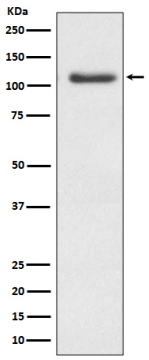
Dilution	WB 1:1000~1:2000 ICC/IF 1:50~1:200 IP 1:50 FC 1:50
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human ERK5
Description	Erk5 (Mitogen-activated protein kinase 7, Big mitogen-activated protein kinase 1) is a member of the MAPK superfamily implicated in the regulation numerous cellular processes including proliferation, differentiation, and survival. In neuronal cells, Erk5 is required for NGF-induced neurite outgrowth, neuronal homeostasis, and survival. Erk5 is thought to play a role in blood vessel integrity via maintenance of endothelial cell migration and barrier function.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

Protein Information

Name	MAPK7
Synonyms	BMK1, ERK5, PRKM7
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. As part of the MAPK/ERK signaling pathway, acts as a negative regulator of apoptosis in cardiomyocytes via interaction with STUB1/CHIP and promotion of STUB1-mediated ubiquitination and degradation of ICER-type isoforms of CREM (By similarity).

	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. Phosphorylates SGK1 at Ser-78 and this is required for growth factor-induced cell cycle progression. Involved in the regulation of p53/TP53 by disrupting the PML-MDM2 interaction.
Cellular Location	Cytoplasm. Nucleus. Nucleus, PML body. Note=Translocates to the nucleus upon activation
Tissue Location	Expressed in many adult tissues. Abundant in heart, placenta, lung, kidney and skeletal muscle. Not detectable in liver

Images



Western blot analysis of ERK5 expression in Hela cell lysate.