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MAPK7

Reactivity: Human Mouse Rat

Tested applications:WB IHC IF

Recommended Dilution:WB 1:500 - 1:2000 IHC 1:50 - 1:200 IF 1:50 - 1:200

Calculated MW:89kDa

Observed MW: Refer to Figures

Immunogen:

Recombinant protein of human MAPK7

Storage Buffer:

Store at -20. Avoid freeze / thaw cycles. Buffer: PBS with 0.02% sodium azide, 50% glycerol, pH7.3.

Concentration:

ao

Synonym:

BMK1; ERK4; ERK5; PRKM7;

Catalog #:A2111

Antibody Type:

Polyclonal Antibody

Species: Rabbit

Gene ID:5598

Isotype: IgG

Swiss Prot:Q13164

Purity: Affinity purification

For research use only.

Background:

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 (1,5-7). Like other MAPK family members, ERK5 contains a canonical activation loop TEY motif (Thr218/Tyr220) which is specifically phosphorylated by MAP2K5 (MEK5) in a growth factor-dependent, Ras-independent mechanism (2-4). For example, EGF stimulation promotes ERK5 phosphorylation which induces its traslocation to the nucleus where it phosphorylates MEF2C and other transcriptional targets (2,3). ERK5 is also activated in response to granulocyte colony-stimulating factor (G-CSF) in hematopoetic progenitor cells where it promotes survival and proliferation (4). In neuronal cells, ERK5 is required for NGF-induced neurite outgrowth, neuronal homeostatis, and survival (11,12). ERK5 is thought to play a role in blood vessel integrity via maintainence of endothelial cell migration and barrier function (8-10). Although broadly expressed, research studies have shown that mice lacking erk5 display numerous cardiac defects, suggesting ERK5 plays a critical role in vascular development and homeostasis (1,5).

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