

## 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:**

as

**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 translocation 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 hematopoietic progenitor cells where it promotes survival and proliferation (4). In neuronal cells, ERK5 is required for NGF-induced neurite outgrowth, neuronal homeostasis, and survival (11,12). ERK5 is thought to play a role in blood vessel integrity via maintenance 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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