Erk5 Antibody

**Important:** For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

**Applications**
- Western (W)
- Immuno precipitation (IP)
- Immunohistochemistry (IHC)
- Chromatin Immunoprecipitation (ChIP)
- Immunofluorescence (IF)
- Flow cytometry (F)
- ELISA-Peptide (E-P)

**Species Cross-reactivity**
- Human (H)
- Mouse (M)
- Rat (R)
- Monkey (Mk)

**Molecular Wt.**
- 115 kDa

**Source**
- Rabbit

**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 (1-4). Like other MAPK family members, Erk5 contains a canonical activation loop TEY motif (Thr218/Tyr220) that is specifically phosphorylated by MAP2K5 (MEK5) in a growth factor-dependent, Ras-independent mechanism (5-7). For example, EGF stimulation promotes Erk5 phosphorylation that induces its translocation to the nucleus where it phosphorylates MEF2C and other transcriptional targets (5,6). Erk5 is also activated in response to granulocyte colony-stimulating factor (G-CSF) in hematopoietic progenitor cells where it promotes survival and proliferation (7). In neuronal cells, Erk5 is required for NGF-induced neurite outgrowth, neuronal homeostasis, and survival (8,9). Erk5 is thought to play a role in blood vessel integrity via maintenance of endothelial cell migration and barrier function (10-12). 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 (1,2).

**Specificity/Sensitivity:** Erk5 Antibody detects endogenous levels of total Erk5 protein. This antibody does not cross-react with Erk1 or Erk2.

**Source/Purification:** Polyclonal antibodies are produced by immunizing animals with a synthetic peptide (KLH-coupled) corresponding to human Erk5. Antibodies are purified by protein A and peptide affinity chromatography.

**Recommended Antibody Dilutions:**
- Western Blotting: 1:1000
- Immunoprecipitation: 1:50

For application specific protocols please see the web page for this product at www.cellsignal.com.

**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

**Entrez-Gene ID:** 5598
**UniProt Acc.:** Q13164

**Applications Key:**
- W—Western
- IP—Immunoprecipitation
- IHC—Immunohistochemistry
- ChIP—Chromatin Immunoprecipitation
- IF—Immunofluorescence
- F—Flow cytometry
- E-P—ELISA-Peptide

**Species Cross-reactivity Key:**
- Human (H)
- Mouse (M)
- Rat (R)
- Hamster (Hm)
- Monkey (Mk)
- Chicken (C)
- D. melanogaster (Dm)
- Z. mays (Z)
- Bovine (B)
- Dog (Dg)
- Pig (Pg)
- S. cerevisiae (Sc)
- C. elegans (Ce)
- Horse (Hr)
- All—species expected

**Species enclosed in parentheses are predicted to react based on 100% homology.**

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- All—species expected

**Recommended Companion Products:**
Please visit www.cellsignal.com for a complete listing of recommended companion products.