



## ***DB019: ERK1 (I23)***

### **Background:**

The mitogen-activated protein kinases (MAPK) consist of several subgroups, including the ERK, JNK, and p38 kinases. The members of this MAPK family are regulated by many different extracellular cues ranging from cytokines, growth factors, and neuropeptides (1). These stimuli activate cell surface receptors to stresses such as cold, heat, osmolarity changes and irradiation. The pathways regulated by the MAPKs control a broad array of cellular responses ranging from survival, cell proliferation, and apoptosis (1,2). The MAPKs family is also characterized by their requirement for dual phosphorylation at a conserved threonine and tyrosine residue for enzymatic activation and both must be phosphorylated for full enzymatic activation (3). The closely related ERK1 (44 kDa) and ERK2 (42 kDa) kinases are characterized by their requirement for dual phosphorylation at a conserved T-E-Y motif (4,5). While JNK1 is activated by dual phosphorylation at a T-P-Y motif and p38 is also activated by dual phosphorylation at a T-G-Y motif (6,7).

### **Origin:**

ERK1 (I23) is provided as an affinity purified rabbit polyclonal antibody, raised against a peptide mapping within the subdomain XI of rat ERK1.

### **Product Details:**

Each vial contains 200 µg/ml of affinity purified rabbit IgG, ERK1 (I23) *DB019*, in 1 ml PBS containing 0.1 % sodium azide and 0.2% gelatin.

### **Competition Studies:**

A blocking peptide is also available, *DB019P*, for use in competition studies. Each vial contains 100 µg of peptide in 0.5 ml PBS with 0.1% sodium azide and 100 µg BSA.

### **Specificity:**

ERK1 (I23) *DB019* reacts with ERK1 p44 and to a lesser extent ERK2 p42 of mouse, rat, and human origin by western blotting, immunoprecipitation, and immunohistochemistry. Western blotting starting dilution: 1:200.

### **Storage:**

Store this product at 4° C, do not freeze. The product is stable for one year from the date of shipment.

### **References:**

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7. Nishida E, Gotoh Y. 1993. The MAP kinase cascade is essential for diverse signal transduction pathways. *Trends Biochem Sci* 18:128-131.

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