

Store at  
-20°C  
#37766

## Total p44/42 MAPK (Erk1/2) Matched Antibody Pair



**Orders:** 877-616-CELL (2355)  
orders@cellsignal.com

**Support:** 877-678-TECH (8324)

**Web:** info@cellsignal.com  
cellsignal.com

**Species Cross Reactivity:**  
H M R Mk

**UniProt ID:**  
#P27361, #P28482

**Entrez-Gene Id:**  
#5595, #5594

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

**For Research Use Only. Not for Use in Diagnostic Procedures.**

Product Includes	Product #	Quantity	Isotype/Source
p44/42 MAPK (Erk1/2) (L29C12D11) Mouse mAb (BSA and Azide Free)	53472	100 µg	Mouse IgG1
p44/42 MAPK (Erk1/2) (137F5) Rabbit mAb (BSA and Azide Free)	68303	100 µg	Rabbit IgG

### Description

The Total p44/42 MAPK (Erk1/2) Matched Antibody Pair is ideal for use with immunoassay technologies and high-throughput ELISA platforms requiring antibody pairs with specialized or custom antibody labeling. Labels include fluorophores, lanthanides, biotin, and beads. Platforms requiring conjugated Matched Antibody Pairs include MSD, Quanterix Simoa, Alpha Technology (AlphaScreen, AlphaLISA, LANCE, HTRF), and Luminex.

Learn how Matched Antibody Pairs move your projects forward, faster at [cst-science.com/matched-antibody-pairs](http://cst-science.com/matched-antibody-pairs).

### Specificity/Sensitivity

This kit detects proteins from the indicated species, as determined through in-house testing, but may also detect homologous proteins from other species.

### Storage

Store at -20°C. *This product will freeze at -20°C so it is recommended to aliquot into single-use vials to avoid multiple freeze/thaw cycles.* A slight precipitate may be present and can be dissolved by gently vortexing. This will not interfere with antibody performance.

### Directions for Use

Matched Antibody Pairs include capture and detection antibodies to non-overlapping epitopes. Optimal dilutions/concentrations should be determined by the end user.

### Formulation

Supplied in 1X PBS (10 mM Na<sub>2</sub>HPO<sub>4</sub>, 3 mM KCl, 2 mM KH<sub>2</sub>PO<sub>4</sub>, and 140 mM NaCl (pH 7.8)). BSA and Azide Free.

### Background

Mitogen-activated protein kinases (MAPKs) are a widely conserved family of serine/threonine protein kinases involved in many cellular programs, such as cell proliferation, differentiation, motility, and death. The p44/42 MAPK (Erk1/2) signaling pathway can be activated in response to a diverse range of extracellular stimuli, including mitogens, growth factors, and cytokines (1-3), and research investigators consider it an important target in the diagnosis and treatment of cancer (4). Upon stimulation, a sequential three-part protein kinase cascade is initiated, consisting of a MAP kinase kinase kinase (MAPKKK or MAP3K), a MAP kinase kinase (MAPKK or MAP2K), and a MAP kinase (MAPK). Multiple p44/42 MAP3Ks have been identified, including members of the Raf family, as well as Mos and Tpl2/COT. MEK1 and MEK2 are the primary MAPKKs in this pathway (5,6). MEK1 and MEK2 activate p44 and p42 through phosphorylation of activation loop residues Thr202/Tyr204 and Thr185/Tyr187, respectively. Several downstream targets of p44/42 have been identified, including p90RSK (7) and the transcription factor Elk-1 (8,9). p44/42 are negatively regulated by a family of dual-specificity (Thr/Tyr) MAPK phosphatases, known as DUSPs or MKPs (10), along with MEK inhibitors, such as U0126 and PD98059.

### Background References

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