

# Phospho-p44/42 MAPK (Erk1/2) (Thr202/Tyr204) (A11) rabbit mAb SureLight 488 conjugate

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## #1115

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**For Research Use Only. Not For Use In Diagnostic Procedures.**

Applications	Detection	Clonality	Isotype
Flow Cytometry	Anti-Rabbit IgG	Monoclonal	Rabbit IgGk

**Format:** SureLight 488

**Cross Reactivity:** Predicted to work with mouse, rat, and other homologues.

**Formulation:** PBS, 0.09% NaN<sub>3</sub>, 0.2% BSA

**Preparation:** Protein A

**Reactivity:** Human, Mouse

### Recommended

**Usage:** For flow cytometric staining, the suggested use of this reagent is 5 µL per million cells or 5 µL per 100 µL of staining volume. It is recommended that the reagent be titrated for optimal performance for each application.

**Immunogen:** A synthetic phospho-peptide corresponding to residues surrounding Thr202/Tyr204 of human phospho Erk1/2.

**Description:** Human Erk1 and Erk2 Ser/Thr kinases share 84% sequence identity and nearly all functions. These MAP kinases are activated in response to mitogens and growth factors as part of the Ras-Raf-MEK-ERK signal transduction cascade(1-3). This pathway regulates cell survival, differentiation, adhesion, cell cycle progression, and many other cellular processes. Upon phosphorylation, Erk1/2 translocate to the nucleus to activate transcription factors including c-Fos, Elk1, Ets1, and SP-1 (4,5). There are more than 175 known cytoplasmic and nuclear substrates of Erk1/2. The Erk1/2 cascade is upregulated in many human cancers, even when oncogenic mutations are not found. Multiple small-molecule inhibitors of Erk1/2 have been developed, including ones targeting the ATP-binding site either competitively or irreversibly (6).

### References:

1. Blagoev B, et al., 2003, Nat Biotechnol, 21:315-318.
2. Thelemann A. et al, 2005, Mol Cell Proteomics 4:356-376.
3. Morandell S., et al., 2008, Proteomics 8:4383-4401.
4. Ramos J.W., 2008, Biochem Cell Biol 40:2707-2719.
5. Nakano H., et al., 1998, Proc Natl Acad Sci U S A. 104:19837-19842.
6. Roskoski Jr R. 2012, Pharmacol Res 66:105-143.

