Anti-pERK1/2 [T202/Y204]-171Yb

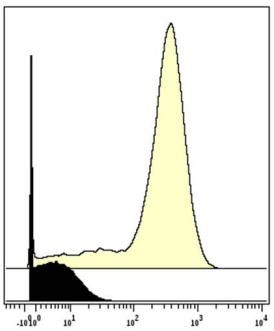
Catalog: 3171010A
Package size: 50 tests
Storage: Store product at 4 °C. Do not freeze.
Cross-reactivity: Rat, Mouse, Human, Bovine, Canine, Porcine, Hamster, Monkey

Clone: D13.14.4E
Isotype: Rabbit IgG
Formulation: Antibody stabilizer with 0.05% sodium azide

Technical Information

Validation: Each lot of conjugated antibody is quality control-tested by CyTOF® analysis of stained cells using the appropriate positive and negative cell staining and/or activation controls.

Recommended usage: The suggested use is 1 µL for up to 3 x 10^6 live cells in 100 µL. It is recommended that the antibody be titrated for optimal performance for each of the desired applications.



pERK1/2 [T202/Y204] (D13.14.4E)-171Yb

Human Jurkat T cells were incubated for 15 minutes in media alone (bottom) or with pervanadate (top). Cells were then fixed, permeabilized and stained with 171Yb-anti-pERK1/2 [T202/Y204] (D13.14.4E).

Description

ERK1 and ERK2, also known as p44 and p42 MAPKs, are similar (85% sequence identity) members of the mitogen activated protein kinase (MAPK) family of serine/threonine protein kinases. ERK1/2 signaling is important in the cellular response to a wide range of stimuli including growth factors, cytokines, and mitogens. The signal cascade upstream of ERK1/2 typically begins with receptor tyrosine kinases phosphorylating members of the Raf family and other MAP kinase kinase kinases (MAP3Ks), which thereby activate MEK1 and MEK2, the MAP kinase kinases (MAPKKs) directly responsible for phosphorylation of ERK1 and ERK2. ERK1 and ERK2 are activated through phosphorylation of the activation loop residues Thr202/Tyr204 and Thr185/Tyr187, and dual phosphorylation is required for full activity. ERK1/2 can activate the RSK family of kinases in the cytoplasm and several transcription factors (i.e. Elk-1) in the nucleus.

References

Bandura, D. R., et al. Mass Cytometry: Technique for Real Time Single Cell Multitarget Immunoassay Based on Inductively Coupled Plasma Time-of-Flight Mass Spectrometry. *Analytical Chemistry* 81 (2009): 6,813–22.

Ornatsky, O. I., et al. Highly Multiparametric Analysis by Mass Cytometry. *Journal of Immunological Methods* 361 (2010): 1–20.

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