

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

## Pathologist-Verified Clone for Imaging Mass Cytometry™

Catalog: 3171021D

Package size and concentration: 25 µg, 0.5 mg/mL

Storage: Store at 4 °C. Do not freeze.

Reactivity: Human, Mouse, Rat, Bovine, Canine, Porcine, Hamster, Monkey

Clone: D13.14.4E

Isotype: Rabbit IgG

Formulation: Antibody stabilizer with 0.05% sodium azide

Application: IMC-Paraffin

## Technical Information

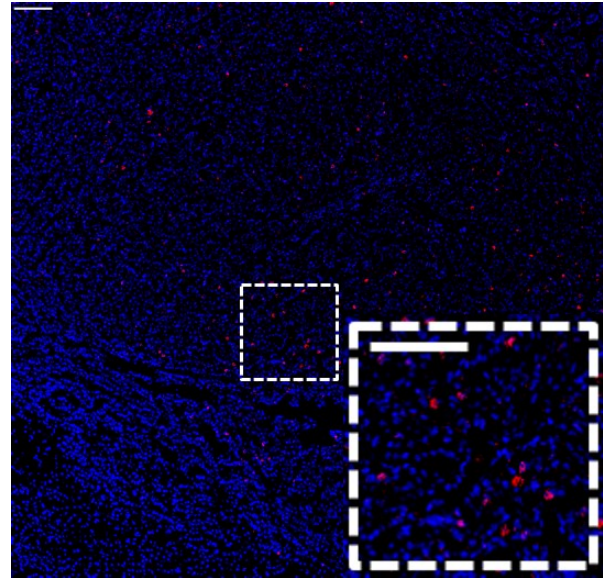
**Application:** The metal-tagged antibody is designed and formulated for the application of Imaging Mass Cytometry (IMC™) using the Fluidigm Hyperion™ Imaging System on formalin-fixed, paraffin-embedded (FFPE) tissue sections.

**Quality control:** Each lot of conjugated antibody is quality control-tested by Imaging Mass Cytometry on tissue sections.

**Recommended concentration:** For optimal performance it is recommended that the antibody be titrated for the desired application. Suggested initial dilution range:  
IMC-Paraffin: 1:25 to 1:100

## 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 transcription factors including Elk-1 in the nucleus.



Human hepatocellular carcinoma (FFPE) stained with 171Yb-anti-pERK1/2 (D13.14.4E) at a dilution of 1:50 (red pseudocolor) and iridium DNA intercalator (blue pseudocolor). Heat-mediated antigen retrieval was performed using Tris/EDTA buffer pH 9. Scale bar size = 100 µm.

## References

Chang, Q. et al. "Staining of frozen and formalin-fixed, paraffin-embedded tissues with metal-labeled antibodies for imaging mass cytometry analysis." *Current Protocols in Cytometry* 82 (2017): 12.47.1–12.47.8.

Giesen, C. et al. "Highly multiplexed imaging of tumor tissues with subcellular resolution by mass cytometry." *Nature Methods* 11 (2014): 417–22.

For technical support visit <http://techsupport.fluidigm.com>. | For general support visit [www.fluidigm.com/support](http://www.fluidigm.com/support).

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