

Product Information

Anti-MAPK3 antibody, Mouse monoclonal
clone mapk3-4, purified from hybridoma cell culture

Product Number **SAB4200712**

Product Description

Anti-MAPK3 antibody, Mouse monoclonal (mouse IgG2a isotype) is derived from the mapk3-4 hybridoma, produced by the fusion of mouse myeloma cells and splenocytes from BALB/c mouse immunized with synthetic peptide from the N-terminal region of human MAPK3, conjugated to KLH. The isotype is determined by ELISA using Mouse Monoclonal Antibody Isotyping Reagents, Product Number ISO2. The antibody is purified from culture supernatant of hybridoma cells.

Monoclonal Anti-MAPK3 specifically recognizes human and monkey MAPK3. Monoclonal Anti-MAPK3 does not show cross reactivity with MAPK1 (ERK2). The product may be used in several immunochemical techniques including Immunoblotting (~43 kDa) and Immunoprecipitation. Detection of the MAPK3 band by Immunoblotting is specifically inhibited by the immunogen.

Mitogen-activated protein kinase 3 (MAPK3), also known as ERK1, ERK2 or p44-MAPK, is a serine/threonine protein kinase. MAPK3 is an essential component of the MAP kinase signal transduction pathway (MAP or ERK1/ERK2 cascade) which participates in the regulation of a large variety of processes, including cell adhesion, cell cycle progression, cell migration, cell survival, differentiation, metabolism, proliferation and transcription.¹ MAPK3 is located in the cell cytoplasm and nucleus. Upon the activation by upstream kinases, such as MAP2K1/MEK1 and MAP2K2/MEK2, MAPK3 is phosphorylated on Thr-202 and Tyr-204, followed by translocation into the nucleus where it in turn, phosphorylates nuclear targets.²⁻³ MAPK3 is known as an important target in the diagnosis and treatment of several diseases including cancer, cardiac hypertrophy and Influenza A infection.^{4,5}

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody Concentration: ~ 1.0 mg/mL

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration of 2-4 µg/mL is recommended using whole extract of human HepG2 cells.

Immunoprecipitation: a working concentration of 5-10 µg/test is recommended using total extract of A431 cells.

Note: In order to obtain best results in different techniques and preparations we recommend determining optimal working concentration by titration test.

References

1. Roskoski R Jr., *Pharmacol Res.*, **66**, 105-43 (2012).
2. Seger R. and Krebs EG. *FASEB J.*, **9**, 726-35 (1995).
3. Pearson G., et al., *Endocr Rev.*, **22**, 153-83 (2001).
4. Fang JY. and Richardson BC., *Lancet Oncol.*, **6**, 322-7 (2005).
5. Buggele WA., et al., *J Biol Chem.*, **287**, 31027-40 (2012).

DR_OKF/LV,SG,PHC 08/16-1