

Mouse Anti-ERK1/2 (p44/42 MAPK) Phospho Thr202/Tyr204 [MD356]: MC0603, MC0603RTU7

Intended Use: For Research Use Only

Description: Mitogen-activated protein kinase (MAPK), also known as extracellular signal-regulated kinase (ERK), includes two closely related kinases ERK1 (p44) and ERK2 (p42). Growth factors, steroid hormones, G protein-coupled receptor ligands and neurotransmitters can initiate MAPK signaling pathways. Activation of ERK1 and ERK2 requires phosphorylation by upstream kinases such as MEK, MEK kinase and Raf-1. ERK1 and ERK2 phosphorylation can occur at specific tyrosine and threonine sites mapping within consensus motifs that include the threonine-glutamate-tyrosine motif. ERK activation leads to dimerization with other ERKs and subsequent localization to the nucleus. Active ERK dimers phosphorylate serine and threonine residues on nuclear proteins and influence a host of responses that include proliferation, differentiation, transcription regulation and development. The human ERK1 gene maps to chromosome 16p11.2 and encodes a 379 amino acid protein that shares 83% sequence identity to ERK2. This antibody detects Thr 202 and Tyr 204 dually phosphorylated ERK1 of human origin, correspondingly Thr 203 and Tyr 205 dually phosphorylated ERK1 of mouse and rat origin; and Thr 185 and Tyr 187 dually phosphorylated ERK 2 of human origin, correspondingly Thr 183 and Tyr 185 dually phosphorylated ERK2 of mouse and rat origin.

Specifications

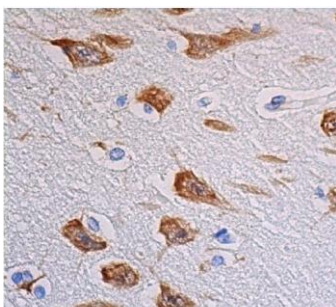
Clone: MD356
Source: Mouse
Isotype: IgG1k
Reactivity: Human
Immunogen: Short amino acid sequence of phosphorylated Thr 202 and Tyr 204 of ERK1
Localization: Cytoplasm, nucleus
Formulation: Antibody in PBS pH7.4, containing BSA and $\leq 0.09\%$ sodium azide (NaN₃)
Storage: Store at 2°- 8°C
Applications: IHC, ICC/IF, WB
Package:

Description	Catalog No.	Size
ERK1/2 (p44/42 MAPK) Phospho Thr202/Tyr204 Concentrated	MC0603	1 ml
ERK1/2 (p44/42 MAPK) Phospho Thr202/Tyr204 Prediluted	MC0603RTU7	7 ml

IHC Procedure*

Positive Control Tissue: Breast carcinoma, colon carcinoma, cerebral cortex tissue
Concentrated Dilution: 50-200
Pretreatment: Tris EDTA pH9.0, 15 minutes Pressure Cooker or 30-60 minutes water bath at 95°-99°C
Incubation Time and Temp: 30-60 minutes @ RT
Detection: Refer to the detection system manual

* Result should be confirmed by an established diagnostic procedure.



FFPE human cerebral cortex tissue stained with anti-ERK1/2 Phospho using DAB

References

1. Epimedokoreanin B inhibits the growth of lung cancer cells through endoplasmic reticulum stress-mediated paraptosis accompanied by autophagosome accumulation. Zheng, H. et al. Chem Biol Interact. 110125, 2022.
2. Methylglyoxal-Derived Advanced Glycation End Products (AGE4) Promote Cell Proliferation and Survival in Renal Cell Carcinoma Cells through the RAGE/Akt/ERK Signaling Pathways. Nam, HK. et al. Biol Pharm Bull. 44: 1697, 2021.