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Human ERK1/MAPK3 antibody

Catalog Number: ATGA0191

PRODUCT INFORMATION

Catalog number
ATGA0191

Clone No.
AT1A2

Product type
Monoclonal Antibody

UnitProt No.
P27361

NCBI Accession No.
NP_002737.2

Alternative Names
Mitogen-activated protein kinase 3, MAP kinase 3, MAPK 3, ERT2, Extracellular signal-regulated kinase 1, ERK-1, Insulin-stimulated MAP2 kinase, MAP kinase isoform p44, p44-MAPK, Microtubule-associated protein 2 kinase, p44-ERK1, PRKM3

PRODUCT SPECIFICATION

Antibody Host
Mouse

Reacts With
Human

Concentration
1mg/ml (determined by BCA assay)

Formulation
Liquid in. Phosphate-Buffered Saline (pH 7.4) with 0.02% Sodium Azide, 10% glycerol

Immunogen
Recombinant human MAPK3 protein (1-137aa) purified from E. coli

Isotype
IgG2b kappa

Purification Note
By protein-G affinity chromatography

Application
ELISA, WB, ICC/IF

Usage
The antibody has been tested by ELISA, Western blot and ICC/IF analysis to assure specificity and reactivity. Since application varies, however, each investigation should be titrated by the reagent to obtain optimal results.

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Storage

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

BACKGROUND

Description

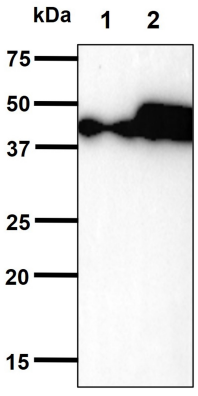
Mitogen-activated protein kinase (MAPKs) are a widely conserved family of serine/threonine kinase involved in many cellular programs such as cell proliferation, differentiation, motility, and death. MAPK3 (ERK1) signaling pathway can be activated in response to a diverse range of extracellular stimuli including mitogens, growth factors, and cytokines and is on important target in the diagnosis and treatment of cancer. Upon stimulation, a sequential three-part protein kinase cascade is initiated, consisting of a MAP kinase kinase kinase (MAPKKK or MAP3K), a MAP kinase kinase (MAPKK or MAP2K), and a MAP kinase (MAPK). Multiple p44/42 MAP3Ks have been identified, including members of the Raf family as well as Mos and Tpl2/Cot. MEK1 and MEK2 are the primary MAPKKs in this pathway.

General References

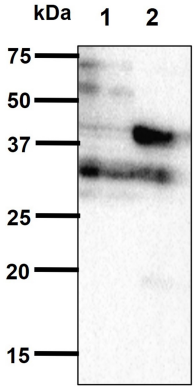
Meloche S, et al,. Oncogene (2007) 26:3227-39
Raman M, et al,. Oncogene (2007) 26:3100-12
Roberts PJ, et al,. Oncogene (2007) 26:3291-310
Shaul YD, et al,. Seger R. Acta (2007) 1773:1213-26

DATA

Western blot analysis (WB)



The Recombinant proteins (50ng) were resolved by SDS-PAGE, transferred to PVDF membrane and probed with anti-human MAPK3 antibody (1:500). Proteins were visualized using a goat anti-mouse secondary antibody conjugated to HRP and an ECL detection system.
Lane 1.: ERK2 recombinant protein
Lane 2.: ERK1 recombinant protein



The Cell lysates (40ug) were resolved by SDS-PAGE, transferred to PVDF membrane and probed with anti-human MAPK3 antibody (1:500). Proteins were visualized using a goat anti-mouse secondary antibody conjugated to HRP and an ECL detection system.
Lane 1.: 293T cell lysate
Lane 2.: ERK1(MAPK3) Transfected 293T lysate

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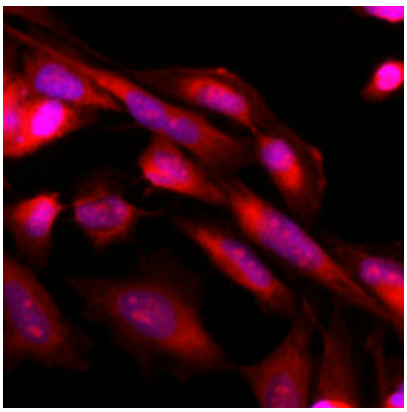
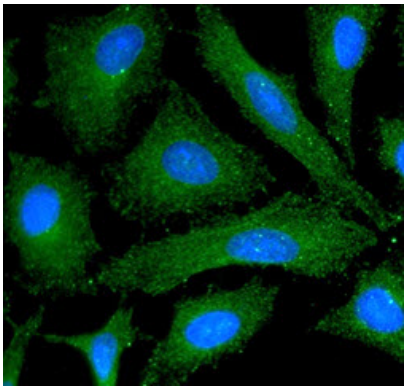
Immunocytochemistry/Immunofluorescence (ICC/IF)



ICC/IF analysis of MAPK3 in HeLa cells line, stained with Hoechst 3342 (Blue) for nucleus staining and monoclonal anti-human MAPK3 antibody (1:500) with goat anti-mouse IgG-Texas Red conjugate (Red)



ICC/IF analysis of MAPK3 in HeLa cells line, stained with DAPI (Blue) for nucleus staining and monoclonal anti-human MAPK3 antibody (1:100) with goat anti-mouse IgG-Alexa fluor 488 conjugate (Green).