Product name:	ERK 1/2 (phospho Tyr222/205) Rabbit Polyclonal Antibody
Cat number:	ABN04634
Conjugate:	Unconjugated
Size:	100µL
Clone:	Polyclonal
Concentration:	1mg/ml
Host:	Rabbit
Isotype:	IgG
Immunogen:	Synthesized phospho-peptide around the phosphorylation site of human ERK 1/2 (phospho Tyr222/205)
Reactivity:	Human,Mouse,Rat
Applications:	WB 1:500-1:2000,IHC 1:50-1:300,ICC/IF 1:50-1:200
Molecular Weight:	44kDa
Purification:	Affinity purification
Form:	Liquid
Buffer:	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.
Storage:	Store at 4°C short term. Aliquot and store at -20°C for 12 months. Avoid freeze/thaw cycles.

Background:

This gene encodes a member of the MAP kinase family. MAP kinases, also known as extracellular signal-regulated kinases (ERKs), act as an integration point for multiple biochemical signals, and are involved in a wide variety of cellular processes such as proliferation, differentiation, transcription regulation and development. The activation of this kinase requires its phosphorylation by upstream kinases. Upon activation, this kinase translocates to the nucleus of the stimulated cells, where it phosphorylates nuclear targets. One study also suggests that this protein acts as a transcriptional repressor independent of its kinase activity. The encoded protein has been identified as a moonlighting protein based on its ability to perform mechanistically distinct functions. Two alternatively spliced transcript variants encoding the same protein, but differing in the UTRs, have been reportecatalytic activity:ATP + a protein = ADP + a phosphoprotein.,cofactor:Magnesium.,domain:The TXY motif contains the threonine and tyrosine residues whose phosphorylation activates the MAP kinases.,enzyme regulation:Activated by phosphorylation on tyrosine and threonine in response to insulin and NGF. Both phosphorylations are required for activity.,function:Involved in both the initiation and regulation of meiosis, mitosis, and postmitotic functions in differentiated cells by phosphorylating a number of transcription factors such as ELK1. Phosphorylates EIF4EBP1; required for initiation of translation. Phosphorylates microtubule-associated protein 2 (MAP2). Phosphorylates SPZ1 (By similarity). Phosphorylates heat shock factor protein 4 (HSF4) and ARHGEF2.,online information:Extracellular signal-regulated kinase entry,PTM:Dually phosphorylated on Thr-185 and Tyr-187, which activates the enzyme.,similarity:Belongs to the protein kinase superfamily.,similarity:Belongs to the protein kinase superfamily. CMGC Ser/Thr protein kinase family. MAP kinase subfamily.,similarity:Contains 1 protein kinase domain.,subunit:Interacts with MORG1 (By similarity). Binds to HIV-1 Nef through its SH3 domain. This interaction inhibits its tyrosine-kinase activity. Interacts with its substrates HSF4 and ARHGEF2. Interacts with NISCH.,