

Product name:	JNK3 Rabbit Polyclonal Antibody
Cat number:	ABN12848
Conjugate:	Unconjugated
Size:	100µL
Clone:	Polyclonal
Concentration:	1mg/ml
Host:	Rabbit
Isotype:	IgG
Immunogen:	The antiserum was produced against synthesized peptide derived from human MAPK10. AA range:361-410
Reactivity:	Human,Mouse,Rat
Applications:	WB 1:500-1:2000,IHC 1:100-1:300,ICC/IF 1:200-1:1000,ELISA 1:10000-1:20000
Molecular Weight:	48kDa
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:

The protein encoded by this gene is a member of the MAP kinase family. MAP kinases act as integration points for multiple biochemical signals and are involved in a wide variety of cellular processes, such as proliferation, differentiation, transcription regulation and development. This kinase is specifically expressed in a subset of neurons in the nervous system and is activated by threonine and tyrosine phosphorylation. Targeted deletion of this gene in mice suggests that it may have a role in stress-induced neuronal apoptosis. Alternatively spliced transcript variants encoding different isoforms have been described for this gene. A recent study provided evidence for translational readthrough in this gene and expression of an additional C-terminally extended isoform via the use of an alternative in-frame translation termination codon. [provided by RefSeq, Dec 2015], alternative products: A similar low level of binding to substrates is observed for isoform alpha-1 and isoform alpha-2. However, there is no correlation between binding and phosphorylation, which is achieved about at the same efficiency by all isoforms, catalytic activity: ATP + a protein = ADP + a phosphoprotein., caution: The sequence shown here is derived from an Ensembl automatic analysis pipeline and should be considered as preliminary data., cofactor: Magnesium., disease: A chromosomal rearrangement involving MAPK10 is a cause of epileptic encephalopathy Lennox-Gastaut type [MIM:606369]. Translocation t(Y;4)(q11.2;q21) which causes MAPK10 truncation. Epileptic encephalopathies of the Lennox-Gastaut group are childhood epileptic disorders characterized by severe psychomotor delay and seizures., domain: The TXY motif contains the threonine and tyrosine residues whose phosphorylation activates the MAP kinases., enzyme regulation: Activated by threonine and tyrosine phosphorylation by two dual specificity kinases, MAP2K4 and MAP2K7. MAP2K7 phosphorylates MAPK10 on Thr-221 causing a conformational change and a large increase in Vmax. MAP2K4 then phosphorylates Tyr-223 resulting in a further increase in Vmax. Inhibited by dual specificity phosphatases, such as DUSP1. Inhibited by HDAC9., function: Responds to activation by environmental stress and pro-inflammatory cytokines by phosphorylating a number of transcription factors, primarily components of AP-1 such as c-Jun and ATF2 and thus regulates AP-1 transcriptional activity. Required for stress-induced neuronal apoptosis and the pathogenesis of glutamate excitotoxicity., mass spectrometry: PubMed:10715136, PTM: Dually phosphorylated on Thr-221 and Tyr-223, which activates the enzyme. Weakly autophosphorylated on threonine and tyrosine residues in vitro., 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 MAPKBP1 (By similarity). Binds to at least four scaffolding proteins, MAPK8IP1/JIP-1, MAPK8IP2/JIP-2, MAPK8IP3/JIP-3/SAP1 and SPAG9/MAPK8IP4/JIP-4. These proteins also bind other components of the JNK signaling pathway. Interacts with HDAC9., tissue specificity: Specific to a subset of neurons in the nervous system. Present in the hippocampus and areas, cerebellum, striatum, brain stem, and weakly in the spinal cord. Very weak expression in testis and kidney.,