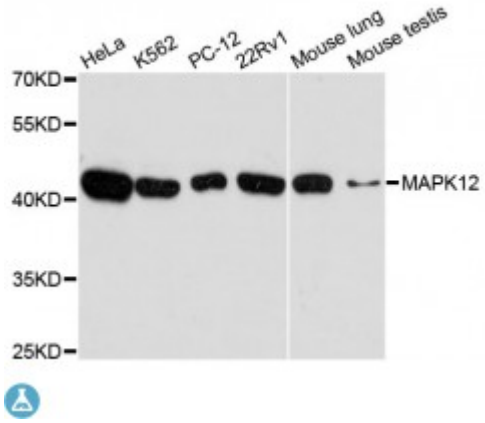
Anti-MAPK12 Antibody



Description	Activation of members of the mitogen-activated protein kinase family is a major mechanism for transduction of extracellular signals. Stress-activated protein kinases are one subclass of MAP kinases. The protein encoded by this gene functions as a signal transducer during differentiation of myoblasts to myotubes.

Model	STJ115013
Host	Rabbit
Reactivity	Human, Mouse
Applications	WB
Immunogen	Recombinant fusion protein containing a sequence corresponding to amino acids 248-367 of human MAPK12 (NP_002960.2).
Gene ID	6300
Gene Symbol	MAPK12
Dilution range	WB 1:2000 - 1:5000
Tissue Specificity	Highly expressed in skeletal muscle and heart
Purification	Affinity purification
Note	For Research Use Only (RUO).
Protein Name	Mitogen-activated protein kinase 12 MAP kinase 12 MAPK 12
Molecular Weight	41.94 kDa
Clonality	Polyclonal

Conjugation	Unconjugated
Isotype	IgG
Formulation	PBS with 0.02% sodium azide, 50% glycerol, pH7.3.
Storage Instruction	Store at -20C. Avoid freeze / thaw cycles.
Database Links	HGNC:6874OMIM:602399Reactome:R-HSA-168638
Alternative Names	Mitogen-activated protein kinase 12 MAP kinase 12 MAPK 12
Function	Serine/threonine kinase which acts as an essential component of the MAP kinase signal transduction pathway, MAPK12 is one of the four p38 MAPKs which play an important role in the cascades of cellular responses evoked by extracellular stimuli such as proinflammatory cytokines or physical stress leading to direct activation of transcription factors such as ELK1 and ATF2, Accordingly, p38 MAPKs phosphorylate a broad range of proteins and it has been estimated that they may have approximately 200 to 300 substrates each, Some of the targets are downstream kinases such as MAPKAPK2, which are activated through phosphorylation and further phosphorylate additional targets, Plays a role in myoblast differentiation and also in the down-regulation of cyclin D1 in response to hypoxia in adrenal cells suggesting MAPK12 may inhibit cell proliferation while promoting differentiation, Phosphorylates DLG1, Following osmotic shock, MAPK12 in the cell nucleus increases its association with nuclear DLG1, thereby causing dissociation of DLG1-SFPQ complexes, This function is independent of its catalytic activity and could affect mRNA processing and/or gene transcription to aid cell adaptation to osmolarity changes in the environment, Regulates UV-induced checkpoint signaling and repair of UV-induced DNA damage and G2 arrest after gamma-radiation exposure, MAPK12 is involved in the regulation of SLC2A1 expression and basal glucose uptake in L6 myotubes
Cellular Localization	Cytoplasm, Nucleus, Mitochondrion,
Post-translational Modifications	Dually phosphorylated on Thr-183 and Tyr-185 by MAP2K3/MKK3 and MAP2K6/MKK6, which activates the enzyme,