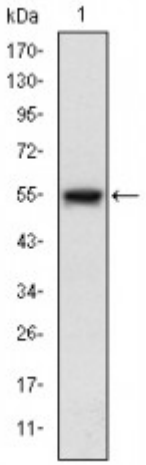
Anti-ASK 1 antibody



Description	Mouse monoclonal to ASK 1.

Model	STJ97852
Host	Mouse
Reactivity	Human
Applications	ELISA, FC, IF, IHC, WB
Immunogen	Purified recombinant fragment of human ASK 1 expressed in E. Coli.
Gene ID	4217
Gene Symbol	MAP3K5
Dilution range	WB 1:500-1:2000IHC 1:200-1:1000IF 1:200-1:1000FC 1:200-1:400ELISA 1:10000
Specificity	ASK 1 Monoclonal Antibody detects endogenous levels of ASK 1 protein.
Tissue Specificity	Abundantly expressed in heart and pancreas.
Purification	Affinity purification
Clone ID	20000
Note	For Research Use Only (RUO).
Protein Name	Mitogen-activated protein kinase kinase kinase 5 Apoptosis signal-regulating kinase 1 ASK-1 MAPK/ERK kinase kinase 5 MEK kinase 5 MEKK 5
Clonality	Monoclonal
Conjugation	Unconjugated

Isotype	IgG1
Formulation	Ascitic fluid containing 0.03% sodium azide.
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:6857OMIM:602448
Alternative Names	Mitogen-activated protein kinase kinase kinase 5 Apoptosis signal-regulating kinase 1 ASK-1 MAPK/ERK kinase kinase 5 MEK kinase 5 MEKK 5
Function	Serine/threonine kinase which acts as an essential component of the MAP kinase signal transduction pathway. Plays an important role in the cascades of cellular responses evoked by changes in the environment. Mediates signaling for determination of cell fate such as differentiation and survival. Plays a crucial role in the apoptosis signal transduction pathway through mitochondria-dependent caspase activation. MAP3K5/ASK1 is required for the innate immune response, which is essential for host defense against a wide range of pathogens. Mediates signal transduction of various stressors like oxidative stress as well as by receptor-mediated inflammatory signals, such as the tumor necrosis factor (TNF) or lipopolysaccharide (LPS). Once activated, acts as an upstream activator of the MKK/JNK signal transduction cascade and the p38 MAPK signal transduction cascade through the phosphorylation and activation of several MAP kinase kinases like MAP2K4/SEK1, MAP2K3/MKK3, MAP2K6/MKK6 and MAP2K7/MKK7. These MAP2Ks in turn activate p38 MAPKs and c-jun N-terminal kinases (JNKs). Both p38 MAPK and JNKs control the transcription factors activator protein-1 (AP-1).
Cellular Localization	Cytoplasm. Endoplasmic reticulum. Interaction with 14-3-3 proteins alters the distribution of MAP3K5/ASK1 and restricts it to the perinuclear endoplasmic reticulum region.
Post-translational Modifications	Phosphorylated at Thr-838 through autophosphorylation and by MAP3K6/ASK2 which leads to activation. Thr-838 is dephosphorylated by PPP5C. Ser-83 and Ser-1033 are inactivating phosphorylation sites, the former of which is phosphorylated by AKT1 and AKT2. Phosphorylated at Ser-966 which induces association of MAP3K5/ASK1 with the 14-3-3 family proteins and suppresses MAP3K5/ASK1 activity. Calcineurin (CN) dephosphorylates this site. Also dephosphorylated and activated by PGAM5. Ubiquitinated. Tumor necrosis factor (TNF) induces TNFR2-dependent ubiquitination leading to proteasomal degradation.