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ASK1 Antibody
Catalog # ASC10387

Specification

ASK1 Antibody - Product Information

Application	**WB, ICC, IF**
Primary Accession	Q99683
Other Accession	Q99683, 6685617
Reactivity	**Human, Mouse**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Application Notes	**ASK1 antibody can be used for the detection of ASK1 by Western blot at 0.5 - 2 µg/mL. Antibody can also be used for immunocytochemistry starting at 2 µg/mL. For immunofluorescence start at 20 µg/mL.**

ASK1 Antibody - Additional Information

Gene ID **4217**

Other Names
ASK1 Antibody: ASK1, MEKK5, MAPKKK5, ASK1, Mitogen-activated protein kinase kinase kinase 5, Apoptosis signal-regulating kinase 1, ASK-1, mitogen-activated protein kinase kinase kinase 5

Target/Specificity
MAP3K5;

Reconstitution & Storage
ASK1 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.

Precautions
ASK1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

ASK1 Antibody - Protein Information

Name MAP3K5

Synonyms ASK1, MAPKKK5, MEKK5

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 Location
Cytoplasm. Endoplasmic reticulum. Note=Interaction with 14-3-3 proteins alters the distribution of MAP3K5/ASK1 and restricts it to the perinuclear endoplasmic reticulum region

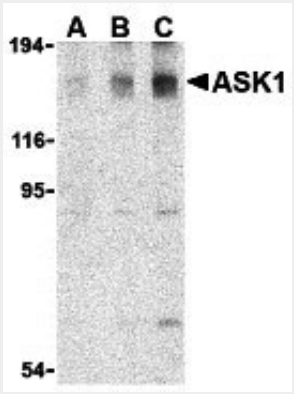
Tissue Location
Abundantly expressed in heart and pancreas.

ASK1 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

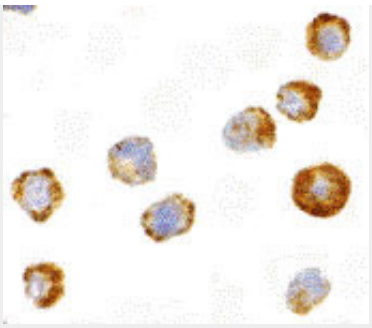
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

ASK1 Antibody - Images

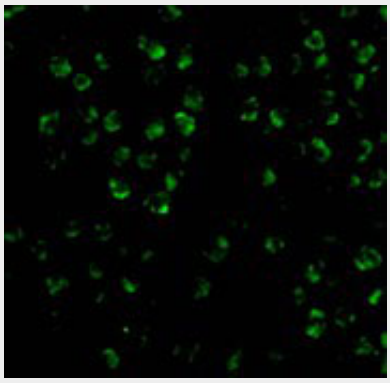


Western blot analysis of ASK1 in SW1353 cell lysate with ASK1 antibody at (A) 0.5, (B) 1, and (C) 2 µg/mL.

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Immunocytochemistry of ASK1 in A431 cells with ASK1 antibody at 2 µg/mL.



Immunofluorescence of ASK1 in 3T3 cells with ASK1 antibody at 20 µg/mL.

ASK1 Antibody - Background

ASK1 Antibody: Mitogen-activated protein (MAP) kinase cascades are activated in response to various extracellular stimuli, including cytokines, growth factors and environmental stresses. A novel MAP kinase kinase kinase (MAPKKK) was recently identified and designated ASK1 (for apoptosis signal-regulating kinase 1) and MAPKKK5. ASK1 activated two different subgroups of MAPKK, MKK4 and MKK6, which in turn activated c-Jun N-terminal kinase (JNK) and p38 MAP kinase, respectively. ASK1/MAPKKK5 is activated by TNFR and Fas through the interaction with members of the TRAF family and Fas-associated protein Daxx. Overexpression of ASK1 induced apoptotic cell death, and a catalytically inactive form of ASK1 inhibited TNF-α-induced apoptosis. ASK1 is expressed in variety of tissues and cell lines.

ASK1 Antibody - References

Ichijo H, Nishida E, Irie K, et al. Induction of apoptosis by ASK1, a mammalian MAPKKK that activates SAPK/JNK and p38 signaling pathways. Science1997; 275:90-4.
Wang XS, Diener K, Jannuzzi D, et al. Molecular cloning and characterization of a novel protein kinase with a catalytic domain homologous to mitogen-activated protein kinase kinase kinase. J. Biol. Chem.1996; 271:31607-11.