

Rabbit SEK1/MKK4 Polyclonal Antibody | anti-SEK1/MKK4 antibody

Phospho-SEK1/MKK4 (Ser80) Antibody

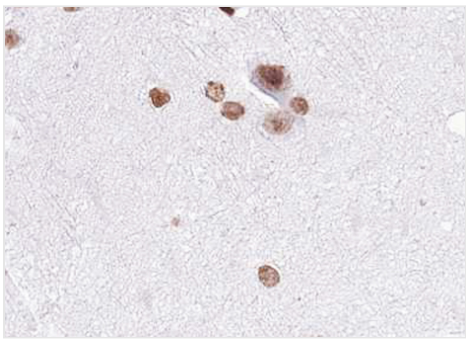
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA321627	Rabbit	Human, Mouse, Rat	ELISA, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

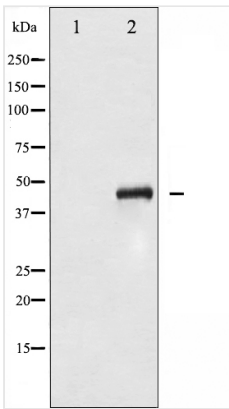
SEK1/MKK4; Polyclonal Antibody; Phospho-SEK1/MKK4 (Ser80) Antibody; c Jun N terminal kinase kinase 1; C-JUN N-terminal kinase kinase 1; Dual specificity mitogen activated protein kinase kinase 4; Dual specificity mitogen-activated protein kinase kinase 4; JNK Activated Kinase 1; JNK activating kinase 1; JNK-activating kinase 1; JNKK; JNKK1; MAP kinase kinase 4; Map2k4; MAPK ERK kinase 4; MAPK/ERK kinase 4; MAPKK 4; MAPKK4; MEK 4; MEK4; Mitogen activated protein kinase kinase 4; MKK 4; MKK4; MP2K4_HUMAN; PRKMK4; SAPK ERK kinase 1; SAPK/ERK kinase 1; SAPKK 1; SAPKK1; SEK1; SERK1; SKK1; Stress activated protein kinase kinase 1; anti-SEK1/MKK4 antibody

PRODUCT SPECIFICATIONS

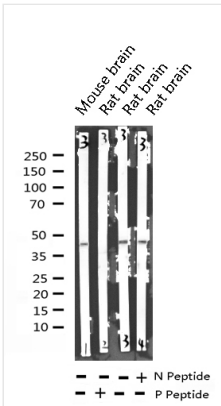
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	Phospho-SEK1/MKK4 (Ser80) antibody detects endogenous levels of SEK1/MKK4 only when phosphorylated at Serine 80
Purity/Purification	From purified rabbit serum by affinity purification via sequential chromatography on phospho-and non-phospho-peptide affinity columns.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	410
Applicable Applications for anti-SEK1/MKK4 antibody	ELISA, IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human SEK1/MKK4 around the phosphorylation site of Serine 80
Subcellular Location	Nucleus
Tissue Specificity	Abundant expression is seen in the skeletal muscle. It is also widely expressed in other tissues.
Predicted Cross Reactivity	Pig, Bovine, Horse, Sheep, Rabbit, Dog, Chicken, Xenopus
Similarity	Pig (100%), Bovine (100%), Horse (100%), Sheep (100%), Rabbit (100%), Dog (100%), Chicken (100%), Xenopus (100%)
Conjugation	Unconjugated
Epitope	Phospho Ser80
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.



IHC (Immunohistochemisry)
AAA321627 at 1/100 staining human brain tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.



WB (Western Blot)
Western blot analysis of SEK1/MKK4 phosphorylation expression in NIH-3T3 whole cell lysates, The lane on the left is treated with the antigen-specific peptide.



WB (Western Blot)
Western blot analysis of Phospho-SEK1/MKK4 (Ser80) expression in various lysates

ADDITIONAL INFORMATION

Related Product Information for anti-SEK1/MKK4 antibody	Description: MKK4 dual specificity kinase of the STE7 family that phosphorylates and activates JNK1 and-2 as well as p38 but not ERK1 or-2. Mediates cellular responses to various cellular stresses and inflammatory cytokines. Phosphorylation by Akt inhibits MKK4 and suppresses stress-activated signal transduction. Function: Dual specificity protein kinase which acts as an essential component of the MAP kinase signal transduction pathway. Essential component of the stress-activated protein kinase/c-Jun N-terminal kinase (SAP/JNK) signaling pathway. With MAP2K7/MKK7, is the one of the only known kinase to directly activate the stress-activated protein kinase/c-Jun N-terminal kinases MAPK8/JNK1, MAPK9/JNK2 and MAPK10/JNK3. MAP2K4/MKK4 and MAP2K7/MKK7 both activate the JNKs by phosphorylation, but they differ in their preference for the phosphorylation site in the Thr-Pro-Tyr motif. MAP2K4 shows preference for phosphorylation of the Tyr residue and MAP2K7/MKK7 for the Thr residue. The phosphorylation of the Thr residue by MAP2K7/MKK7 seems to be the prerequisite for JNK activation at least in response to proinflammatory cytokines, while other stimuli activate both MAP2K4/MKK4 and MAP2K7/MKK7 which synergistically phosphorylate JNKs. MAP2K4 is required for maintaining peripheral lymphoid homeostasis. The MKK/JNK signaling pathway is also involved in mitochondrial death signaling pathway, including the release cytochrome c, leading to apoptosis. Whereas MAP2K7/MKK7 exclusively activates JNKs, MAP2K4/MKK4 additionally activates the p38 MAPKs MAPK11, MAPK12, MAPK13 and MAPK14. Subunit Structure: Interacts with SPAG9 (By similarity). Interacts (via its D domain) with its substrates MAPK8/JNK1, MAPK9/JNK2, MAPK10/JNK3, MAPK11 and MAPK14. Interacts (via its DVD domain) with MAP3Ks activators like MAP3K1/MEKK1 and MAP3K11/MLK3. Interacts with ARRB1, ARRB2 and MAPK8IP3/JIP3. Post-translational Modifications: Activated by phosphorylation on Ser-257 and Thr-261 by MAP kinase kinase kinases (MAP3Ks). Similarity: The DVD domain (residues 364-387) contains a conserved docking site and is found in the mammalian MAP kinase kinases (MAP2Ks). The DVD sites bind to their specific upstream MAP kinase kinase kinases (MAP3Ks) and are essential for activation. The D domain (residues 34-52) contains a conserved docking site and is required for the binding to MAPK substrates. Belongs to the protein kinase superfamily. STE Ser/Thr protein kinase family. MAP kinase kinase subfamily.
---	--

NCBI AND UNIPROT INFORMATION

NCBI GI #	526479851
NCBI GeneID	6416
NCBI Accession #	NP_001268364.1
NCBI GenBank Nucleotide #	NM_001281435.1
UniProt Accession #	P45985; Q5U0B8; Q6FHX4; Q6P9H2; Q6PIE6; B2R7N7; B3KYB2; D3DTS5
Molecular Weight	Observed: 44 kDa Predicted: 45 kDa
NCBI Official Full Name	dual specificity mitogen-activated protein kinase kinase 4 isoform 2
NCBI Official Synonym Full Names	mitogen-activated protein kinase kinase 4
NCBI Official Symbol	MAP2K4
NCBI Official Synonym Symbols	JNKK; MEK4; MKK4; SEK1; SKK1; JNKK1; SERK1; MAPKK4; PRKMK4; SAPKK1; SAPKK-1
NCBI Protein Information	dual specificity mitogen-activated protein kinase kinase 4
UniProt Protein Name	Dual specificity mitogen-activated protein kinase kinase 4
UniProt Gene Name	MAP2K4
UniProt Synonym Gene Names	JNKK1; MEK4; MKK4; PRKMK4; SEK1; SERK1; SKK1; MAP kinase kinase 4; MAPKK 4; MEK 4; SEK1; SAPK kinase 1; SAPKK-1; SAPKK1; JNKK

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.