

Rabbit anti-Human MAPK14 Polyclonal Antibody | anti-MAPK14 antibody

MAPK14 Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA232579	Rabbit	Human	Immunofluorescence, Immunohistochemistry, ELISA

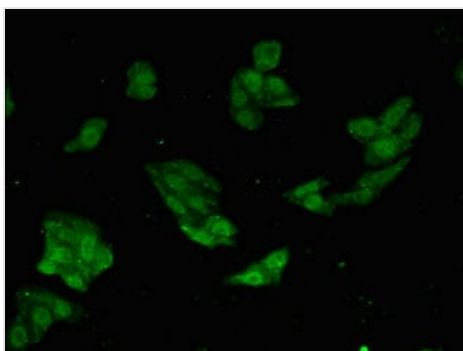
PRODUCT SYNONYMS

MAPK14; Polyclonal Antibody; MAPK14 Antibody; Mitogen-activated protein kinase 14; Cytokine suppressive anti-inflammatory drug-binding protein; CSAID-binding protein; CSBP; MAP kinase MXI2; MAX-interacting protein 2; Mitogen-activated protein kinase p38 alpha; MAP kinase p38 alpha; Stress-activated protein kinase 2a; SAPK2a; CSBP1; CSBP2; CSPB1; MXI2; SAPK2A; anti-MAPK14 antibody

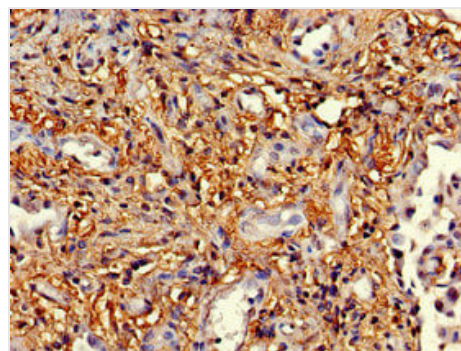
PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human
Clonality	Polyclonal
Isotype	IgG
Purity/Purification	>95%, Protein G purified
Form/Format	Liquid
Sequence Length	360
Applicable Applications for anti-MAPK14 antibody	IF (Immunofluorescence), IHC (Immunohistochemistry), ELISA
Immunogen	Recombinant Human Mitogen-activated protein kinase 14 protein (2-258AA)
Preservative	0.03% Proclin 300
Constituents	50% Glycerol, 0.01M PBS, PH 7.4
Conjugation	Non-conjugated
Santa Cruz Alternative	Potential replacement for Santa Cruz Biotechnology antibody catalog# sc-535 / sc-7149 / sc-728
Preparation and Storage	Shipped at 4 degree C. Upon delivery aliquot and store at -20 degree C or -80 degree C. Avoid repeated freeze.

IMAGES


IF (Immunofluorescence)

Immunofluorescent analysis of HepG2 cells using AAA232579 at a dilution of 1:100 and Alexa Fluor 488-conjugated AffiniPure Goat Anti-Rabbit IgG(H+L)


IHC (Immunohistochemistry)

Immunohistochemistry of paraffin-embedded human lung cancer using AAA232579 at dilution of 1:100

ADDITIONAL INFORMATION

Related Product Information for anti-MAPK14 antibody	Serine/threonine kinase which acts as an essential component of the MAP kinase signal transduction pathway. MAPK14 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. 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 which are activated through phosphorylation and further phosphorylate additional targets. RPS6KA5/MSK1 and RPS6KA4/MSK2 can directly phosphorylate and activate transcription factors such as CREB1, ATF1, the NF-kappa-B isoform RELA/NFKB3, STAT1 and STAT3, but can also phosphorylate histone H3 and the nucleosomal protein HMGN1. RPS6KA5/MSK1 and RPS6KA4/MSK2 play important roles in the rapid induction of immediate-early genes in response to stress or mitogenic stimuli, either by inducing chromatin remodeling or by recruiting the transcription machinery. On the other hand, two other kinase targets, MAPKAPK2/MK2 and MAPKAPK3/MK3, participate in the control of gene expression mostly at the post-transcriptional level, by phosphorylating ZFP36 (tristetraprolin) and ELAVL1, and by regulating EEF2K, which is important for the elongation of mRNA during translation. MKNK1/MNK1 and MKNK2/MNK2, two other kinases activated by p38 MAPKs, regulate protein synthesis by phosphorylating the initiation factor EIF4E2. MAPK14 interacts also with casein kinase II, leading to its activation through autophosphorylation and further phosphorylation of TP53/p53. In the cytoplasm, the p38 MAPK pathway is an important regulator of protein turnover. For example, CFLAR is an inhibitor of TNF-induced apoptosis whose proteasome-mediated degradation is regulated by p38 MAPK phosphorylation. In a similar way, MAPK14 phosphorylates the ubiquitin ligase SIAH2, regulating its activity towards EGLN3. MAPK14 may also inhibit the lysosomal degradation pathway of autophagy by interfering with the intracellular trafficking of the transmembrane protein ATG9. Another function of MAPK14 is to regulate the endocytosis of membrane receptors by different mechanisms that impinge on the small GTPase RAB5A. In addition, clathrin-mediated EGFR internalization induced by inflammatory cytokines and UV irradiation depends on MAPK14-mediated phosphorylation of EGFR itself as well as of RAB5A effectors. Ectodomain shedding of transmembrane proteins is regulated by p38 MAPKs as well. In response to inflammatory stimuli, p38 MAPKs phosphorylate the membrane-associated metalloprotease ADAM17. Such phosphorylation is required for ADAM17-mediated ectodomain shedding of TGF-alpha family ligands, which results in the activation of EGFR signaling and cell proliferation. Another p38 MAPK substrate is FGFR1. FGFR1 can be translocated from the extracellular space into the cytosol and nucleus of target cells, and regulates processes such as rRNA synthesis and cell growth. FGFR1 translocation requires p38 MAPK activation. In the nucleus, many transcription factors are phosphorylated and activated by p38 MAPKs in response to different stimuli. Classical examples include ATF1, ATF2, ATF6, ELK1, PTPRH, DDIT3, TP53/p53 and MEF2C and MEF2A. The p38 MAPKs are emerging as important modulators of gene expression by regulating chromatin modifiers and remodelers. The promoters of several genes involved in the inflammatory response, such as IL6, IL8 and IL12B, display a p38 MAPK-dependent enrichment of histone H3 phosphorylation on 'Ser-10' (H3S10ph) in LPS-stimulated myeloid cells. This phosphorylation enhances the accessibility of the cryptic NF-kappa-B-binding sites marking promoters for increased NF-kappa-B recruitment. Phosphorylates CDC25B and CDC25C which is required for binding to 14-3-3 proteins and leads to initiation of a G2 delay after ultraviolet radiation. Phosphorylates TIAR following DNA damage, releasing TIAR from GADD45A mRNA and preventing mRNA degradation. The p38 MAPKs may also have kinase-independent roles, which are thought to be due to the binding to targets in the absence of phosphorylation. Protein O-Glc-N-acylation catalyzed by the OGT is regulated by MAPK14, and, although OGT does not seem to be phosphorylated by MAPK14, their interaction increases upon MAPK14 activation induced by glucose deprivation. This interaction may regulate OGT activity by recruiting it to specific targets such as neurofilament H, stimulating its O-Glc-N-acylation. Required in mid-fetal development for the growth of embryo-derived blood vessels in the labyrinth layer of the placenta. Also plays an essential role in developmental and stress-induced erythropoiesis, through regulation of EPO gene expression. Isoform MXI2 activation is stimulated by mitogens and oxidative stress and only poorly phosphorylates ELK1 and ATF2. Isoform EXIP may play a role in the early onset of apoptosis. Phosphorylates S100A9 at 'Thr-113'.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	4503069
NCBI GeneID	1432
NCBI Accession #	NP_001306.1
NCBI GenBank Nucleotide #	NM_001315.2
UniProt Accession #	Q16539; O60776; Q13083; Q14084; Q8TDX0; A6ZJ92; A8K6P4; B0LPH0; B5TY32
Molecular Weight	29,388 Da

NCBI Official Full Name	mitogen-activated protein kinase 14 isoform 1
NCBI Official Synonym Full Names	mitogen-activated protein kinase 14
NCBI Official Symbol	MAPK14
NCBI Official Synonym Symbols	RK; p38; CSBP; EXIP; Mxi2; CSBP1; CSBP2; CSPB1; PRKM14; PRKM15; SAPK2A; p38ALPHA
NCBI Protein Information	mitogen-activated protein kinase 14
UniProt Protein Name	Mitogen-activated protein kinase 14
UniProt Gene Name	MAPK14
UniProt Synonym Gene Names	CSBP; CSBP1; CSBP2; CSPB1; MXI2; SAPK2A; MAP kinase 14; MAPK 14; CSAID-binding protein; CSBP; MAP kinase p38 alpha; SAPK2a
UniProt Entry Name	MK14_HUMAN

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.

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Online datasheet: <https://www.aaabiotech.com/polyclonal/mapk14-antibody-immunofluorescence-immunohistochemistry-elisa/232579>