

Rabbit SIK Polyclonal Antibody | anti-SIK antibody

Phospho-SIK (Thr182) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA329748	Rabbit	Human, Mouse, Rat Predicted Reactivity: Pig (100%), Zebrafish (90%), Dog (100%), Chicken (100%)	ELISA, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

SIK; Polyclonal Antibody; Phospho-SIK (Thr182) Antibody; KID2; MSK; myocardial SNF1 like kinase; QIK; Qin-induced kinase; Salt inducible kinase 1; Salt-inducible protein kinase 1; Serine threonine protein kinase SNF1 like kinase 1; Serine threonine protein kinase SNF1LK; Serine/threonine-protein kinase SIK1; Serine/threonine-protein kinase SNF1-like kinase 1; Serine/threonine-protein kinase SNF1LK; SIK-1; SIK1; SIK1_HUMAN; SNF1 like kinase; anti-SIK antibody

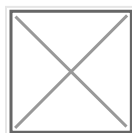
PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat Predicted Reactivity: Pig (100%), Zebrafish (90%), Dog (100%), Chicken (100%)
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Phospho-SIK (Thr182) Antibody detects endogenous levels of SIK only when phosphorylated at Thr182.
Purity/Purification	The antibody is from purified rabbit serum by affinity purification via sequential chromatography on phospho-peptide and non-phospho-peptide affinity columns.
Form/Format	Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Applicable Applications for anti-SIK antibody	ELISA (Peptide ELISA), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human SIK around the phosphorylation site of Thr182.
Conjugation	Unconjugated
Fragment	Fab fragment
Post Translational Modifications	Phosphorylated at Thr-182 by STK11/LKB1 in complex with STE20-related adapter-alpha (STRADA) pseudo kinase and CAB39, leading to its activation. Phosphorylation at Thr-182 promotes autophosphorylation at Ser-186, which is required for sustained activity. Autophosphorylation at Ser-186 is maintained by sequential phosphorylation at Thr-182 by GSK3-beta. GSK3-beta cannot initiate phosphorylation at Thr-182, it can only maintain it. Phosphorylation at Ser-575 in response to cAMP signaling promotes translocation to the cytoplasm. Phosphorylation at Thr-322 by CaMK1 following intracellular sodium concentration leads to activation.
Subunit Structure	Interacts with ATP1A1 (By similarity). Interacts (when phosphorylated on Thr-182 and Ser-186) with YWHAZ. Interacts (when phosphorylated at Thr-473 and/or Ser-575) with 14-3-3 proteins; the interaction inhibits kinase activity towards TORCs. There is a cooperative effect of the phosphorylation sites in 14-3-3 binding as the interaction is stronger when both Thr-473 and Ser-575 are modified.
Similarity	The RK-rich region determines the subcellular location and is required for cAMP responsiveness. Belongs to the protein kinase superfamily. CAMK Ser/Thr protein kinase family. AMPK subfamily.
Subcellular Location	Cytoplasm. Nucleus. Note: Locates to cytoplasm when inactive following cAMP-induced phosphorylation, probably by PKA (PubMed:29211348).

Preparation and Storage

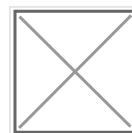
Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



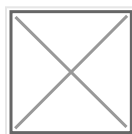
IHC (Immunohistochemistry)

At 1/200 staining Human lung cancer 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 antibody.



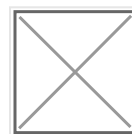
IHC (Immunohistochemistry)

At 1/200 staining Mouse testis 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 antibody.



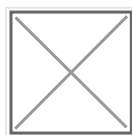
IHC (Immunohistochemistry)

At 1/200 staining Rat liver 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 antibody.



WB (Western Blot)

Western blot analysis SIK (Phospho-Thr182) using EGF treated HeLa whole cell lysates. -/+ means absence or presence of N peptide (non-phospho peptide) and P peptide (phospho peptide).



WB (Western Blot)

Western blot analysis of extracts from HeLa, using SIK (Phospho-Thr182) Antibody.

ADDITIONAL INFORMATION

Related Product Information for anti-SIK antibody

Serine/threonine-protein kinase involved in various processes such as cell cycle regulation, gluconeogenesis and lipogenesis regulation, muscle growth and differentiation and tumor suppression. Phosphorylates HDAC4, HDAC5, PPME1, SREBF1, CRTC1/TORC1. Inhibits CREB activity by phosphorylating and inhibiting activity of TORCs, the CREB-specific coactivators, like CRTC2/TORC2 and CRTC3/TORC3 in response to cAMP signaling. Acts as a tumor suppressor and plays a key role in p53/TP53-dependent anoikis, a type of apoptosis triggered by cell detachment: required for phosphorylation of p53/TP53 in response to loss of adhesion and is able to suppress metastasis. Part of a sodium-sensing signaling network, probably by mediating phosphorylation of PPME1: following increases in intracellular sodium, SIK1 is activated by CaMK1 and phosphorylates PPME1 subunit of protein phosphatase 2A (PP2A), leading to dephosphorylation of sodium/potassium-transporting ATPase ATP1A1 and subsequent increase activity of ATP1A1. Acts as a regulator of muscle cells by phosphorylating and inhibiting class II histone deacetylases HDAC4 and HDAC5, leading to promote expression of MEF2 target genes in myocytes. Also required during cardiomyogenesis by regulating the exit of cardiomyoblasts from the cell cycle via down-regulation of CDKN1C/p57Kip2. Acts as a regulator of hepatic gluconeogenesis by phosphorylating and repressing the CREB-specific coactivators CRTC1/TORC1 and CRTC2/TORC2, leading to inhibit CREB activity. Also regulates hepatic lipogenesis by phosphorylating and inhibiting SREBF1. In concert with CRTC1/TORC1, regulates the light-induced entrainment of the circadian clock by attenuating PER1 induction; represses CREB-mediated transcription of PER1 by phosphorylating and deactivating CRTC1/TORC1 (By similarity).

NCBI AND UNIPROT INFORMATION

NCBI GI #	116256471
NCBI GeneID	150094
NCBI Accession #	NP_775490.2
NCBI GenBank Nucleotide #	NM_173354.3
UniProt Accession #	P57059; Q5R2V5; Q6ZNL8; Q86YJ2; A6NC84

Molecular Weight	84,902 Da
NCBI Official Full Name	serine/threonine-protein kinase SIK1
NCBI Official Synonym Full Names	salt-inducible kinase 1
NCBI Official Symbol	SIK1
NCBI Official Synonym Symbols	MSK; SIK; SNF1LK
NCBI Protein Information	serine/threonine-protein kinase SIK1; SIK-1; SNF1-like kinase; myocardial SNF1-like kinase; salt-inducible protein kinase 1; serine/threonine protein kinase; serine/threonine-protein kinase SNF1LK; serine/threonine-protein kinase SNF1-like kinase 1
UniProt Protein Name	Serine/threonine-protein kinase SIK1
UniProt Gene Name	SIK1
UniProt Synonym Gene Names	SIK; SNF1LK; SIK-1
UniProt Entry Name	SIK1_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://stage.aaabiotech.com/polyclonal/sik-antibody-peptide-elisa-immunohistochemistry-western-blot-elisa/329748>