10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

SIK1 / MSK Antibody (Internal)
Rabbit Polyclonal Antibody
Catalog # ALS14822

Specification

SIK1 / MSK Antibody (Internal) - Product Information

Application	**WB, IHC**
Primary Accession	P57059
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**

SIK1 / MSK Antibody (Internal) - Additional Information

Gene ID 102724428;150094

Other Names
Serine/threonine-protein kinase SIK1, 2.7.11.1, Salt-inducible kinase 1, SIK-1, Serine/threonine-protein kinase SNF1-like kinase 1, Serine/threonine-protein kinase SNF1LK, SIK1, SIK, SNF1LK

Target/Specificity
Human SIK1 / SNF1LK. Two isoforms of SIK1 are known to exist; this antibody will detect both isoforms. SIK1 antibody is predicted to not cross-react with other SIK protein family members.

Reconstitution & Storage
Short term 4°C, long term aliquot and store at -20°C, avoid freeze thaw cycles. Store undiluted.

Precautions
SIK1 / MSK Antibody (Internal) is for research use only and not for use in diagnostic or therapeutic procedures.

SIK1 / MSK Antibody (Internal) - Protein Information

Name SIK1

Synonyms SIK, SNF1LK

Function
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 (PubMed:29211348). 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).

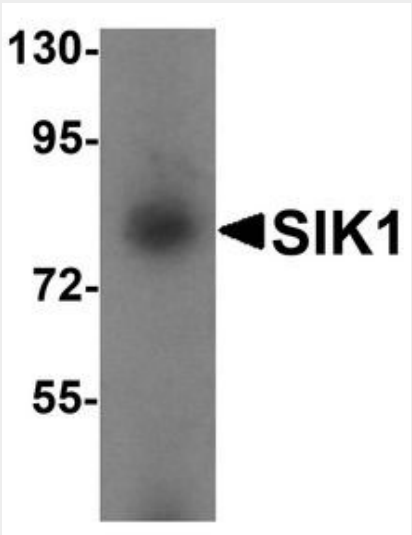
Cellular Location
Cytoplasm. Nucleus. Note=Locates to cytoplasm when inactive following cAMP-induced phosphorylation, probably by PKA (PubMed:29211348)

SIK1 / MSK Antibody (Internal) - Protocols

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

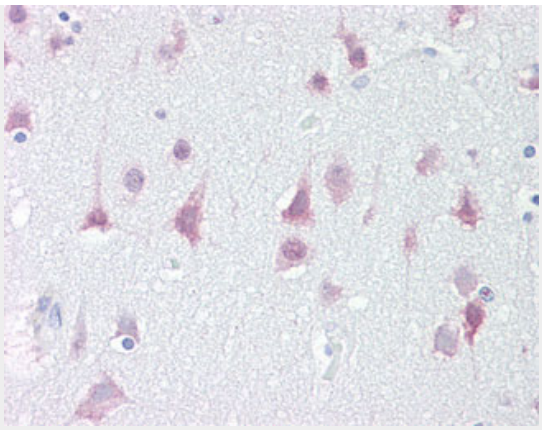
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

SIK1 / MSK Antibody (Internal) - Images

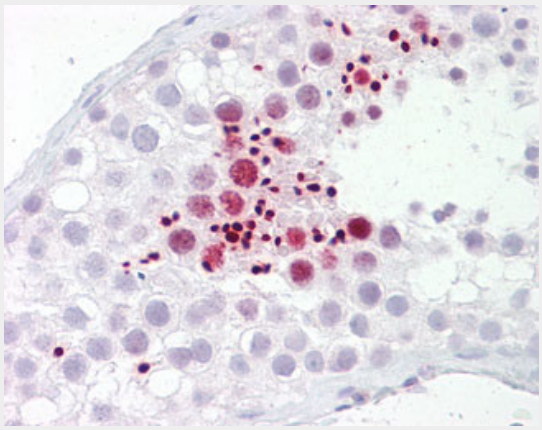


Western blot analysis of SIK1 in human small intestine tissue lysate with SIK1 antibody at 1 ug/ml.

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Anti-SIK1 / SNF1LK antibody IHC of human brain, cortex.



Anti-SIK1 / SNF1LK antibody IHC of human testis.