abcam

ab227044

Anti-SIK3 antibody [EPR20880-249]

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG1
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR20880-249
Purification technique	Affinity purification Protein A
Concentration	0.789 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Mouse
Dilution info	1/50
Notes	-

Not recommended

Species	Human, Rat
Dilution info	-
Notes	-

IP

Not recommended

Species	Mouse, Human, Rat
Dilution info	-
Notes	-

Flow Cyt

Tested

Species	Mouse
Dilution info	1/500
Notes	-

Not recommended

Species	Human, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Mouse
Dilution info	1/1000
Notes	-

Not recommended

Species	Rat, Human
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Mouse, Human, Rat
Dilution info	-
Notes	-

Target data

See full target information Sik3

Function	Positive regulator of mTOR signaling that functions by triggering the degradation of DEPTOR, an mTOR inhibitor (By similarity). Required for chondrocyte hypertrophy during skeletogenesis (PubMed:22318228). Negatively regulates cAMP signaling pathway possibly by acting on CRTC2/TORC2 and CRTC3/TORC3 (By similarity). Prevents HDAC4 translocation to the nucleus (PubMed:22318228).

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	SIK3 also known as salt-inducible kinase 3 is a serine/threonine-protein kinase with a molecular mass of approximately 140 kDa. This protein is expressed in many tissues including liver muscle and pancreas. Mechanically SIK3 phosphorylates key substrates involved in the regulation of various cellular functions enhancing or inhibiting their activity. Its action often involves regulating metabolism cytokine signaling and cellular growth processes.
Biological function summary	SIK3 participates in the regulation of glucose metabolism and energy homeostasis. It acts as part of larger complexes that control transcription factors and enzymes related to metabolic processes. These complexes help respond to cellular signals and external stress adjusting cellular functions to maintain balance. It influences the activity of enzymes and transcriptional regulators involved in lipid and carbohydrate metabolism playing a role in energy balance maintenance.
Pathways	SIK3 influences gluconeogenesis and insulin signaling pathways. It is closely connected with proteins such as AMPK (AMP-activated protein kinase) regulating energy sensor mechanisms and metabolic stress responses. These pathways are critical in controlling glucose production and utilization which affect overall energy homeostasis in the body.
Associated diseases and disorders	SIK3's dysfunction links to metabolic disorders like type 2 diabetes and obesity. Altered SIK3 activity affects insulin signaling which can contribute to impaired glucose regulation. It also connects to the protein LKB1 (liver kinase B1) in metabolic disease contexts as both play roles in regulating energy metabolism and maintaining glucose levels. Understanding SIK3's role provides insights for targeting metabolic diseases through therapeutic strategies.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

We do not recommend this combination. It is not covered by our product promise.

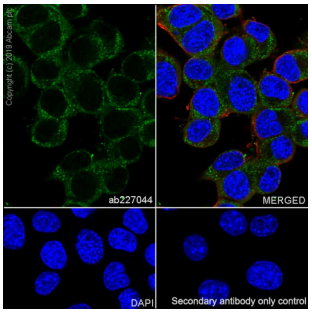
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

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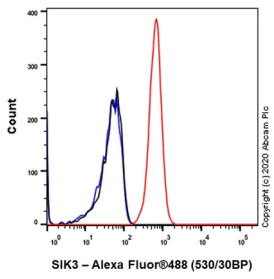
3 product images



Immunocytochemistry/ Immunofluorescence - Anti-SIK3 antibody [EPR20880-249] (ab227044)

SIK3 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-SIK3 antibody

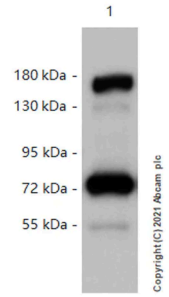
Immunocytochemical analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized Neuro-2a cells labelling SIK3 with ab227044 at 1/50 (15.78 ug/ml) dilution, followed by ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) antibody at 1/1000 dilution (Green). Confocal image showing cytoplasmic staining in Neuro-2a cells. Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) (ab195889) was used to counterstain tubulin at 1/200 (2.5 ug/ml) dilution (Red). The Nuclear counterstain was DAPI (Blue).
Secondary antibody only control: Secondary antibody is Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) at 1/1000 dilution.



Flow Cytometry - Anti-SIK3 antibody [EPR20880-249] (ab227044)

SIK3 Flow Cytometry staining using rabbit Anti-SIK3 antibody

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized Neuro-2a (mouse neuroblastoma neuroblast) cells labelling SIK3 with ab227044 at 1/500 dilution (0.1ug) (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat anti rabbit IgG (Alexa Fluor® 488) (ab150077) at 1/2000 dilution was used as the secondary antibody.



Western blot - Anti-SIK3 antibody [EPR20880-249] (ab227044)

SIK3 Western blot staining of Mouse cortex tissue lysate using rabbit Anti-SIK3 antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST.
Data was kindly provided by Dr. Qinghua Liu, NIBS.

The 1st Ab working concentration was 5 ug/ml.

All lanes:
Western blot - Anti-SIK3 antibody [EPR20880-249] (ab227044) at 0.789 µg/mL

All lanes:
Mouse cortex tissue lysate at 4 µg

Predicted band size: 140 kDa

Observed band size: 150 kDa, 70 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.