abcam

ab250726

Anti-Germinal Center Kinase/GCK antibody [EPR14304] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR14304
Purification technique	Affinity purification Protein A
Concentration	1.003 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Human
Dilution info	-

Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information MAP4K2

Function	Serine/threonine-protein kinase which acts as an essential component of the MAP kinase signal transduction pathway. Acts as a MAPK kinase kinase kinase (MAP4K) and is an upstream activator of the stress-activated protein kinase/c-Jun N-terminal kinase (SAP/JNK) signaling pathway and to a lesser extent of the p38 MAPKs signaling pathway. Required for the efficient activation of JNKs by TRAF6-dependent stimuli, including pathogen-associated molecular patterns (PAMPs) such as polyinosine-polycytidine (poly(IC)), lipopolysaccharides (LPS), lipid A, peptidoglycan (PGN), or bacterial flagellin. To a lesser degree, IL-1 and engagement of CD40 also stimulate MAP4K2-mediated JNKs activation. The requirement for MAP4K2/GCK is most pronounced for LPS signaling, and extends to LPS stimulation of c-Jun phosphorylation and induction of IL-8. Enhances MAP3K1 oligomerization, which may relieve N-terminal mediated MAP3K1 autoinhibition and lead to activation following autophosphorylation. Also mediates the SAP/JNK signaling pathway and the p38 MAPKs signaling pathway through activation of the MAP3Ks MAP3K10/MLK2 and MAP3K11/MLK3. May play a role in the regulation of vesicle targeting or fusion. regulation of vesicle targeting or fusion. Activator of the Hippo signaling pathway which plays a pivotal role in organ size control and tumor suppression by restricting proliferation and promoting apoptosis. MAP4Ks act in parallel to and are partially redundant with STK3/MST2 and STK4/MST2 in the phosphorylation and activation of LATS1/2, and establish MAP4Ks as components of the expanded Hippo pathway (PubMed:26437443).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab250726 is the carrier-free version of ab184169.

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.

Conjugation ready
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility
This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Supplementary info

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

Activity summary	Germinal Center Kinase (GCK) also known as GCK kinase or GCK is part of the STE20 family of serine/threonine protein kinases. It has a mass of approximately 72 kDa. GCK mainly expresses in lymphoid tissues and is important for signaling processes. Its activity involves phosphorylating downstream substrates which helps regulate cell signaling pathways associated with cell survival and apoptosis.
Biological function summary	This kinase plays a significant role in the body's immune response by participating in signal transduction pathways that govern germinal center formation and function. GCK operates as a kinase that is sometimes part of larger protein complexes which allows it to have diverse biological roles. Through various signaling cascades it influences cellular activities that are important for immune system function including B-cell development and antibody production.
Pathways	GCK integrates itself into major signaling routes such as the MAPK and JNK pathways. These pathways control a range of cellular processes including proliferation differentiation and stress responses. GCK interacts with other proteins like MEKK1 and 14-3-3 which facilitate its role in these pathways. Such interactions enable the regulation of important cellular functions by modifying target proteins through phosphorylation.
Associated diseases and disorders	Dysregulated GCK activity has implications in various conditions such as autoimmune diseases and certain types of cancer. Abnormal GCK function may alter immune cell regulation which can result in autoimmune phenomena. Additionally modified GCK signaling impacts cancer progression where its interaction with tumor suppressor proteins like p53 may influence tumorigenesis and tumor survival mechanisms.

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

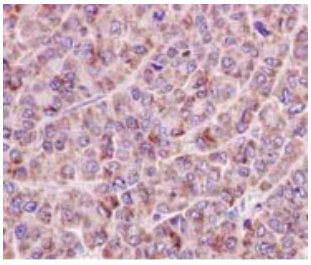
We do not recommend this combination. It is not covered by our product promise.

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.

3 product images

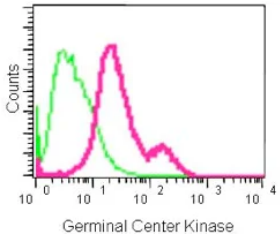


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Germinal Center Kinase/GCK antibody [EPR14304] - BSA and Azide free (ab250726)

Germinal Center Kinase/GCK Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Germinal Center Kinase/GCK antibody

This data was developed using ab184169, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded Human hepatocellular carcinoma labeling Germinal Center Kinase/GCK with ab184169 at 1/100 dilution followed by pre-diluted HRP-conjugated secondary antibody and counter-stained with Hematoxylin.

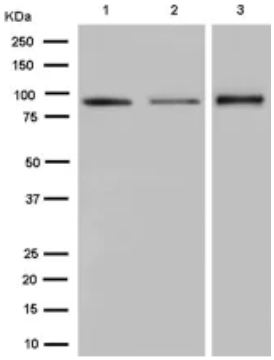
Perform heat mediated antigen retrieval with EDTA buffer pH 9 before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-Germinal Center Kinase/GCK antibody [EPR14304] - BSA and Azide free (ab250726)

Germinal Center Kinase/GCK Flow Cytometry (Intracellular) staining using rabbit Anti-Germinal Center Kinase/GCK antibody

This data was developed using ab184169, the same antibody clone in a different buffer formulation.
Intracellular flow cytometric analysis of Ramos cells (2% paraformaldehyde-fixed) labeling Germinal Center Kinase/GCK with ab184169 at 1/170 dilution (red) or a rabbit IgG (negative) (green), followed by Goat anti rabbit IgG (FITC) secondary at 1/150 dilution.



Western blot - Anti-Germinal Center Kinase/GCK antibody [EPR14304] - BSA and Azide free (ab250726)

Germinal Center Kinase/GCK Western blot staining using rabbit Anti-Germinal Center Kinase/GCK antibody

This data was developed using ab184169, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-Germinal Center Kinase/GCK antibody [EPR14304] (ab184169) at 1/10000 dilution

Lane 1:
Namalwa cell lysate at 20 µg

Lane 2:
Ramos cell lysate at 20 µg

Lane 3:
Human fetal brain tissue lysate at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 92 kDa

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