abcam

ab248711

Anti-GSTK1 antibody [EPR1939] - BSA and Azide free

Recombinant | RabMAb | KO Validated

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	EPR1939
Purification technique	Affinity purification Protein A
Concentration	1.001 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	-

Notes	The immunostaining was performed on a Leica Biosystems BOND® RX instrument.

IP

Tested

Species	Human
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Target data

See full target information GSTK1

Function	Glutathione S-transferase that catalyzes the conjugation of glutathione to exogenous and endogenous compounds (PubMed:14709161, PubMed:14742434). Significant glutathione conjugating activity is found only with the model substrate, 1-chloro-2,4-dinitrobenzene (CDNB) (PubMed:14709161).

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

ab248711 is the carrier-free version of ab134173.

Species reactivity

Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.

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	GSTK1 also known as Glutathione S-transferase kappa 1 is an enzyme with a mass of approximately 26 kDa. This protein belongs to the glutathione S-transferase family which plays a significant role in detoxification processes through conjugation reactions. GSTK1 displays a broad tissue expression with abundant presence in liver and kidneys as well as other tissues which facilitates its involvement in protecting cells from oxidative stress and chemical damage.
Biological function summary	GSTK1 is part of the cellular defense mechanism against xenobiotic and oxidative stress. This enzyme participates in the neutralization of harmful compounds by facilitating their conjugation with glutathione a powerful antioxidant. GSTK1 functions independently and does not form part of a larger protein complex. Its activity is important in maintaining cellular homeostasis and preventing damage caused by reactive oxygen species.
Pathways	GSTK1 has critical involvement in glutathione metabolism and xenobiotic detoxification pathways. It interacts functionally with proteins like GSTM1 which are also part of the glutathione S-transferase family enhancing the cell's ability to detoxify harmful substances. GSTK1 helps to modulate the cellular response to oxidative stress through these pathways ensuring protection against toxicity.
Associated diseases and disorders	GSTK1 has been linked to conditions including cancer and liver diseases. Its detoxification role makes GSTK1 significant in cancer biology where its expression levels may influence tumor resistance to chemotherapy. Additionally GSTK1 has connections with other glutathione S-transferases like GSTP1 which have associations with similar disorders affecting cellular protection 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

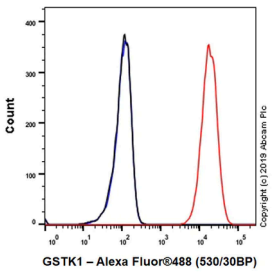
We do not recommend this combination. It is not covered by our product promise.

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.

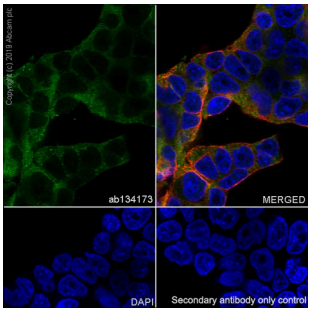
6 product images



Flow Cytometry (Intracellular) - Anti-GSTK1 antibody [EPR1939] - BSA and Azide free (ab248711)

GSTK1 Flow Cytometry (Intracellular) staining using rabbit Anti-GSTK1 antibody

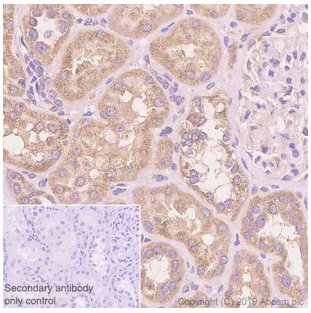
Intracellular Flow Cytometry analysis of HeLa (Human cervix adenocarcinoma epithelial cell) cells labeling GSTK1 with Purified ab134173 at 1/30 dilution (10 µg/mL) (Red). Cells were fixed with 4% Paraformaldehyde and permeabilised with 90% Methanol. A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) secondary antibody was used at 1/2000. Isotype control - Rabbit monoclonal IgG (Black). Unlabeled control - Cell without incubation with primary antibody and secondary antibody (Blue). This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab134173).



Immunocytochemistry/ Immunofluorescence - Anti-GSTK1 antibody [EPR1939] - BSA and Azide free (ab248711)

GSTK1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-GSTK1 antibody

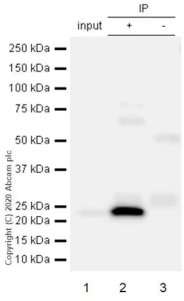
Immunocytochemistry/ Immunofluorescence analysis of 293T (Human embryonic kidney epithelial cell) cells labeling GSTK1 with Purified ab134173 at 1/50 dilution (5.92 µg/mL). Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100. Cells were counterstained with ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1/200 (2.5 µg/mL). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1/1000 (2 µg/mL) dilution. DAPI (blue) was used as nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab134173).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GSTK1 antibody [EPR1939] - BSA and Azide free (ab248711)

GSTK1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-GSTK1 antibody

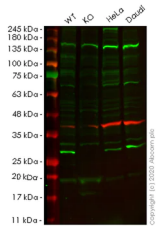
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human kidney tissue sections labeling GSTK1 with Purified ab134173 at 1/300 dilution (0.99 µg/mL). Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0). Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab134173).



Immunoprecipitation - Anti-GSTK1 antibody [EPR1939] - BSA and Azide free (ab248711)

Purified ab134173 at 1/30 dilution (2ug) immunoprecipitating GSTK1 in HeLa whole cell lysate.
Lane 1 (input): HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate (10µg)
Lane 2 (+): ab134173 + HeLa whole cell lysate.
Lane 3 (-): Rabbit monoclonal IgG (ab172730) instead of ab134173 in HeLa whole cell lysate.
VeriBlot for IP Detection Reagent (HRP) (ab131366) (1/1000) was used for Western blotting.
Blocking Buffer and concentration: 5% NFDM/TBST.
Diluting buffer and concentration: 5% NFDM/TBST.
Observed band size: 25 kDa
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab134173).
All lanes:
Immunoprecipitation - Anti-GSTK1 antibody [EPR1939] (ab134173)

Predicted band size: 25 kDa



Western blot - Anti-GSTK1 antibody [EPR1939] - BSA and Azide free (ab248711)

GSTK1 Western blot staining using rabbit Anti-GSTK1 antibody

This data was developed using the same antibody clone in a different buffer formulation (ab134173).
Lanes 1-4: Merged signal (red and green). Green - ab134173 observed at 27 kDa. Red - loading control ab8245 observed at 36 kDa.

ab134173 Anti-GSTK1 antibody [EPR1939] was shown to specifically react with GSTK1 in wild-type HEK293T cells. Loss of signal was observed when knockout cell line ab266112 (knockout cell lysate ab257461) was used. Wild-type and GSTK1 knockout samples were subjected to SDS-PAGE. ab134173 and Anti-GAPDH antibody [6C5] - Loading Control (ab8245) were incubated at room temperature for 2. 5 hours at 1 in 1000 dilution and 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (ab216773) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (ab216776) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.

All lanes:
Western blot - Anti-GSTK1 antibody [EPR1939] (ab134173) at 1/1000 dilution

Lane 1:
Wild-type HEK293T cell lysate at 20 µg

Lane 2:
Western blot - Human GSTK1 knockout HEK-293T cell lysate (ab257461) at 20 µg

Lane 3:
HeLa cell lysate at 20 µg

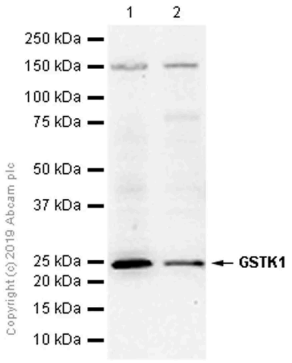
Lane 4:
Daudi cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (ab216773) at 1/10000 dilution

Predicted band size: 25 kDa

Observed band size: 27 kDa



Western blot - Anti-GSTK1 antibody [EPR1939] - BSA and Azide free (ab248711)

GSTK1 Western blot staining using rabbit Anti-GSTK1 antibody

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab134173).
All lanes:
Western blot - Anti-GSTK1 antibody [EPR1939] (ab134173) at 1/1000 dilution

Lane 1:
HEK-293 (Human embryonic kidney epithelial cell) whole cell lysates at 20 µg

Lane 2:
HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysates at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Predicted band size: 25 kDa

Observed band size: 25 kDa

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