

Product datasheet

Anti-GSK3 (alpha + beta) (phospho Y216 + Y279) antibody [EPR933Y] - BSA and Azide free ab239862

Recombinant RabMAb

7 Images

Overview

Product name	Anti-GSK3 (alpha + beta) (phospho Y216 + Y279) antibody [EPR933Y] - BSA and Azide free
Description	Rabbit monoclonal [EPR933Y] to GSK3 (alpha + beta) (phospho Y216 + Y279) - BSA and Azide free
Host species	Rabbit
Tested applications	Suitable for: IHC-P, Dot blot, IP, WB Unsuitable for: Flow Cyt or ICC
Species reactivity	Reacts with: Mouse, Rat, Human Predicted to work with: Zebrafish
Immunogen	Synthetic peptide within Human GSK3 (alpha + beta). The exact sequence is proprietary.
Positive control	IHC: Human thyroid carcinoma, human ovarian carcinoma.
General notes	Ab239862 is the carrier-free version of ab68476 . This format is designed for use in antibody labeling, including fluorochromes, metal isotopes, oligonucleotides, enzymes.

Our [carrier-free formats](#) are supplied in a buffer free of BSA, sodium azide and glycerol for higher conjugation efficiency.

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.

ab239862 is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm.

Maxpar® is a trademark of Fluidigm Canada Inc.

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 production

For more information [see here](#).

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

Reproducibility is key to advancing scientific discovery and accelerating scientists' next breakthrough.

Abcam is leading the way with our range of recombinant antibodies, knockout-validated antibodies and knockout cell lines, all of which support improved reproducibility.

We are also planning to innovate the way in which we present recommended applications and species on our product datasheets, so that only applications & species that have been tested in our own labs, our suppliers or by selected trusted collaborators are covered by our Abpromise™ guarantee.

In preparation for this, we have started to update the applications & species that this product is Abpromise guaranteed for.

We are also updating the applications & species that this product has been “predicted to work with,” however this information is not covered by our Abpromise guarantee.

Applications & species from publications and Abreviews that have not been tested in our own labs or in those of our suppliers are not covered by the Abpromise guarantee.

Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, as well as customer reviews and Q&As.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C. Do Not Freeze.
Storage buffer	pH: 7.2 Constituent: PBS
Carrier free	Yes
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR933Y
Isotype	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab239862** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-P		1/50. Perform heat mediated antigen retrieval before commencing with IHC staining protocol. This antibody may not be suitable for IHC with mouse, rat or zebrafish samples. See IHC antigen retrieval protocols .
Dot blot		Use at an assay dependent concentration.
IP		Use at an assay dependent concentration.

Application	Abreviews	Notes
WB		Use at an assay dependent concentration. Detects a band of approximately 47-52 kDa (predicted molecular weight: 47 kDa).

Application notes Is unsuitable for Flow Cyt or ICC.

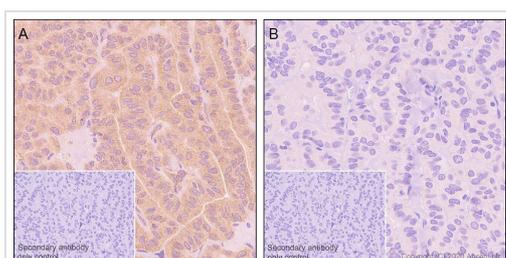
Target

Relevance

Glycogen synthase kinase 3 (GSK3) is a proline directed serine threonine kinase that was initially identified as a phosphorylating and inactivating glycogen synthase, a key enzyme in glycogen metabolism. Since then, it has been shown to be involved in the regulation of a diverse array of cellular functions, including protein synthesis, cell proliferation, cell differentiation, microtubule assembly/disassembly, and apoptosis. GSK3s substrate specificity is unique in that phosphorylation of substrate only occurs if a phosphoserine or phosphotyrosine is present four residues C terminal to the site of GSK phosphorylation. There exists two isoforms of GSK3, alpha and beta, and they show a high degree of amino acid homology. The two isoforms of GSK3 are strictly regulated via phosphorylation. Phosphorylation of GSK3 beta on Ser9 (Ser21 in GSK3 alpha) by protein kinase B (PKB) causes its inactivation is the primary mechanism responsible for growth factor inhibition of this kinase. Activation of GSK3 beta is dependent upon the phosphorylation of Tyr216 (Tyr279 in GSK3 alpha). Upon activation, it has been shown to phosphorylate a number of different cellular proteins, including p53, c-Myc, c-Jun, heat shock factor 1 (HSF1), and cyclin D1. GSK3 beta also has been shown to phosphorylate aberrant sites on the microtubule associated protein tau, which is critical for the progression of Alzheimer's disease. GSK3B is involved in energy metabolism, neuronal cell development, and body pattern formation.

Cellular localization Cytoplasmic and Nuclear

Images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GSK3 (alpha + beta) (phospho Y216 + Y279) antibody [EPR933Y] - BSA and Azide free (ab239862)

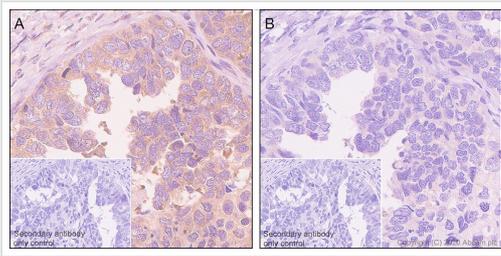
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human thyroid carcinoma tissue labelling GSK3 (alpha + beta) with purified [ab68476](#) at 1/2000. Heat mediated antigen retrieval was performed using Bond™ Epitope Retrieval Solution 2 (pH 9.0) for 20 minutes. [ab209101](#), a Rabbit specific IHC polymer detection kit HRP/DAB was used. Negative control using PBS instead of primary antibody. Counterstained with hematoxylin.

Positive staining on human thyroid carcinoma without alkaline phosphatase treatment (image A). No signal was detected when tissues were treated with alkaline phosphatase (image B).

The section was incubated with [ab68476](#) for 30 minutes at room temperature. The immunostaining staining was performed on a Leica Biosystems BOND® RX instrument.

This data was developed using the same antibody clone in a

different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab68476](#)).



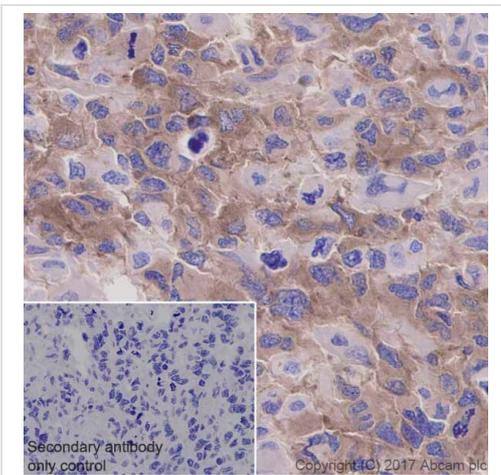
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GSK3 (alpha + beta) (phospho Y216 + Y279) antibody [EPR933Y] - BSA and Azide free ([ab239862](#))

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human ovarian carcinoma tissue labelling GSK3 (alpha + beta) with purified [ab68476](#) at 1/2000. Heat mediated antigen retrieval was performed using Bond™ Epitope Retrieval Solution 2 (pH 9.0) for 20 minutes. [ab209101](#), a Rabbit specific IHC polymer detection kit HRP/DAB was used. Negative control using PBS instead of primary antibody. Counterstained with hematoxylin.

Positive staining on human ovarian carcinoma without alkaline phosphatase treatment (image A). No signal was detected when tissues were treated with alkaline phosphatase (image B).

The section was incubated with [ab68476](#) for 30 minutes at room temperature. The immunostaining staining was performed on a Leica Biosystems BOND® RX instrument.

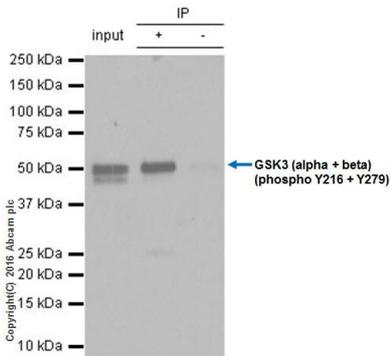
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab68476](#)).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GSK3 (alpha + beta) (phospho Y216 + Y279) antibody [EPR933Y] - BSA and Azide free ([ab239862](#))

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human glioma tissue sections labeling GSK3 (alpha + beta) with Purified [ab68476](#) at 1:50 dilution (5.3 µg/ml). Heat mediated antigen retrieval was performed using [ab93684](#) (Tris/EDTA buffer, pH 9.0). Tissue was counterstained with Hematoxylin. ImmunoHistoProbe one step HRP Polymer (ready to use) secondary antibody was used at 1:0 dilution. PBS instead of the primary antibody was used as the negative control.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab68476](#)).



Immunoprecipitation - Anti-GSK3 (alpha + beta) (phospho Y216 + Y279) antibody [EPR933Y] - BSA and Azide free (ab239862)

GSK3 (alpha + beta) (phospho Y216 + Y279) was immunoprecipitated from 10µg HeLa (human cervix adenocarcinoma) whole cell lysate with [ab68476](#) at 1/50 dilution (2µg in 0.35mg lysates). Western blot was performed from the immunoprecipitate using [ab68476](#) at 1/200 dilution (9 µg/ml). VeriBlot for IP Detection Reagent (HRP) ([ab131366](#)), was used for detection at 1/1000 dilution.

Lane 1 (Input): HeLa (human cervix adenocarcinoma) treated with 1uM staurosporine for 4h whole cell lysate 10µg

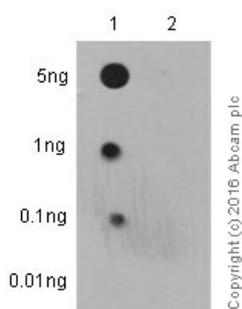
Lane 2 (+): HeLa (human cervix adenocarcinoma) treated with 1uM staurosporine for 4h whole cell lysate

Lane 3: Rabbit monoclonal IgG ([ab172730](#)) instead of [ab68476](#) in HeLa (human cervix adenocarcinoma) treated with 1uM staurosporine for 4h whole cell lysate

Exposure Time: 30 seconds

Blocking and diluting buffer and concentration: 5% NFDm/TBST.

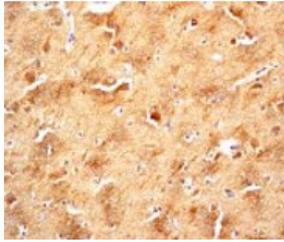
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab68476](#)).



Dot Blot - Anti-GSK3 (alpha + beta) (phospho Y216 + Y279) antibody [EPR933Y] - BSA and Azide free (ab239862)

Dot Blot analysis of Lane 1: Human GSK3 (alpha + beta) (pY216 + pY279) phospho peptide and Lane 2: Human GSK3 (alpha + beta) non-phospho peptide labeling GSK3 (alpha + beta) (phospho Y216 + Y279) with [ab68476](#) at 1/1000 dilution. 5% NFDm/TBST was used as the diluting and blocking buffer. [ab97051](#) Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated was used as the secondary antibody at 1/100000 dilution. Exposure time: 3 minutes.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab68476](#)).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GSK3 (alpha + beta) (phospho Y216 + Y279) antibody [EPR933Y] - BSA and Azide free (ab239862)

Human brain tissue stained with unpurified [ab68476](#) at 1/100 dilution.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab68476](#)).

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

Why choose a recombinant antibody?



Research with confidence
Consistent and reproducible results



Long-term and scalable supply
Recombinant technology



Success from the first experiment
Confirmed specificity



Ethical standards compliant
Animal-free production

Anti-GSK3 (alpha + beta) (phospho Y216 + Y279) antibody [EPR933Y] - BSA and Azide free (ab239862)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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