abcam

Product datasheet

HRP Anti-GSK3 beta antibody [Y174] ab196911

KO VALIDATED Recombinant RabMAb

3 Images

Overview

Product name	HRP Anti-GSK3 beta antibody [Y174]
Description	HRP Rabbit monoclonal [Y174] to GSK3 beta
Host species	Rabbit
Conjugation	HRP
Tested applications	**Suitable for:** WB
Species reactivity	**Reacts with:** Human **Predicted to work with:** Mouse
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: A431 whole cell lysate.
General notes	Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle. Store In the Dark.
Storage buffer	pH: 7.40 Preservative: 0.1% Proclin 300 Solution Constituents: 30% Glycerol (glycerin, glycerine), 1% BSA, PBS
Purity	Protein A purified
Clonality	Monoclonal
Clone number	Y174
Isotype	IgG

Applications

The Abpromise guarantee	Our **Abpromise guarantee** covers the use of ab196911 in the following tested applications.

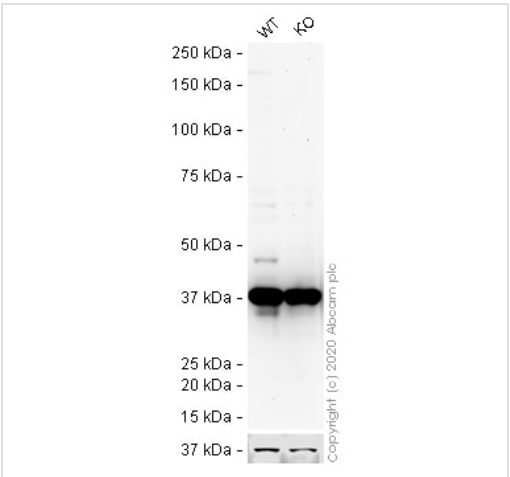
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		1/5000. Detects a band of approximately 38 kDa (predicted molecular weight: 46 kDa).

Target

Function	Participates in the Wnt signaling pathway. Implicated in the hormonal control of several regulatory proteins including glycogen synthase, MYB and the transcription factor JUN. Phosphorylates JUN at sites proximal to its DNA-binding domain, thereby reducing its affinity for DNA. Phosphorylates MUC1 in breast cancer cells, and decreases the interaction of MUC1 with CTNNB1/beta-catenin. Phosphorylates CTNNB1/beta-catenin. Phosphorylates SNAI1. Plays an important role in ERBB2-dependent stabilization of microtubules at the cell cortex. Prevents the phosphorylation of APC and CLASP2, allowing its association with the cell membrane. In turn, membrane-bound APC allows the localization of MACF1 to the cell membrane, which is required for microtubule capture and stabilization. Phosphorylates MACF1 and this phosphorylation inhibits the binding of MACF1 to microtubules which is critical for its role in bulge stem cell migration and skin wound repair.
Tissue specificity	Expressed in testis, thymus, prostate and ovary and weakly expressed in lung, brain and kidney.
Sequence similarities	Belongs to the protein kinase superfamily. CMGC Ser/Thr protein kinase family. GSK-3 subfamily. Contains 1 protein kinase domain.
Post-translational modifications	Phosphorylated by AKT1 and ILK1. Activated by phosphorylation at Tyr-216.
Cellular localization	Cytoplasm. Nucleus. Cell membrane. The phosphorylated form shows localization to cytoplasm and cell membrane. The MEMO1-RHOA-DIAPH1 signaling pathway controls localization of the phosophorylated form to the cell membrane.

Images



Western blot - HRP Anti-GSK3 beta antibody [Y174] (ab196911)

All lanes : HRP Anti-GSK3 beta antibody [Y174] (ab196911) at 1/5000 dilution

Lane 1 : Wild-type HAP1 whole cell lysate

Lane 2 : GSK3B knockout HAP1 whole cell lysate

Lysates/proteins at 20 µg per lane.

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 46 kDa

Observed band size: 46 kDa

Exposure time: 20 minutes

ab196911 was shown to recognize GSK3 beta in wild-type HAP1 cells as signal was lost at the expected MW in GSK3B knockout cells. Additional cross-reactive bands were observed in the wild-type and knockout cells. Wild-type and GSK3B knockout samples were subjected to SDS-PAGE. Ab196911 and **ab184095** (Mouse monoclonal [mAbcam 9484] to GAPDH - Loading Control (Alexa Fluor® 680) loading control) were incubated overnight at 4°C at 1/5000 dilution and 1/1000 dilution respectively. The loading control was imaged using the Licor Odyssey CLx prior to blots being developed with ECL technique.

Western blot - HRP Anti-GSK3 beta antibody [Y174] (ab196911)

HRP Anti-GSK3 beta antibody [Y174] (ab196911) at 1/5000 dilution + A431 (Human epithelial carcinoma cell line) Whole Cell Lysate at 10 µg

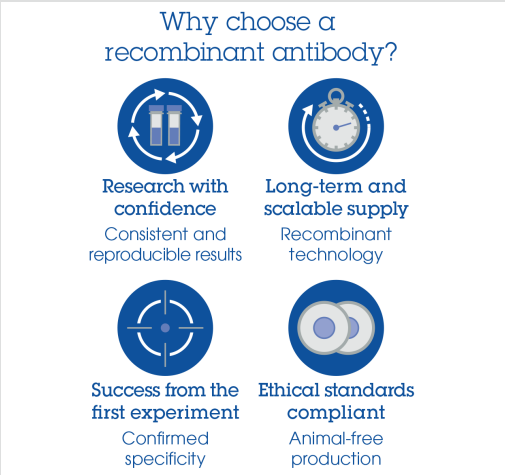
Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 46 kDa
Observed band size: 38 kDa

Exposure time: 2 seconds

This blot was produced using a 4-12% Bis-tris gel under the MOPS buffer system. The gel was run at 200V for 50 minutes before being transferred onto a Nitrocellulose membrane at 30V for 70 minutes. The membrane was then blocked for an hour using 2% Bovine Serum Albumin before being incubated with ab196911 overnight at 4°C. Antibody binding was visualised using ECL development solution **ab133406**.



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