abcam

Product datasheet

Anti-GSK3 beta antibody ab227208

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Overview

Product name	Anti-GSK3 beta antibody
Description	Rabbit polyclonal to GSK3 beta
Host species	Rabbit
Tested applications	**Suitable for:** ICC/IF, IHC-P, WB
Species reactivity	**Reacts with:** Mouse, Rat, Human **Predicted to work with:** Sheep, Cow, Pig
Immunogen	Recombinant fragment within Human GSK3 beta (internal sequence). The exact sequence is proprietary. Database link: **P49841**
Positive control	WB: HEK-293T and K562 whole cell extracts; Mouse brain lysate. IHC-P: H661 xenograft tissue; Rat brain tissue. ICC/IF: SK-N-SH cells.
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. 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, along with publications, customer reviews and Q&As

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 long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.00 Preservative: 0.01% Thimerosal (merthiolate) Constituents: 1.21% Tris, 0.75% Glycine, 10% Glycerol (glycerin, glycerine)
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab227208 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
ICC/IF		1/100 - 1/1000.
IHC-P		1/100 - 1/1000.
WB		1/500 - 1/3000. 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.

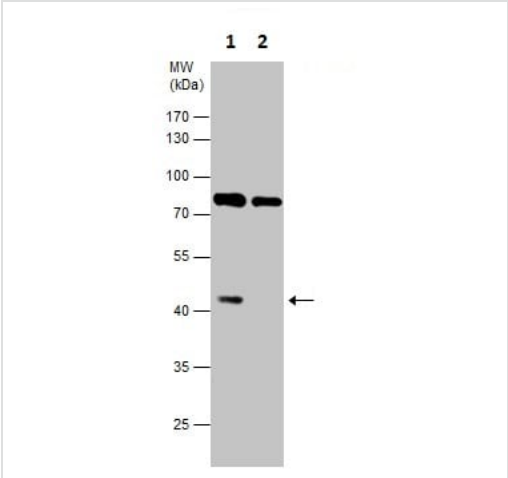
Tissue specificity Expressed in testis, thymus, prostate and ovary and weakly expressed in lung, brain and kidney.

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 - Anti-GSK3 beta antibody (ab227208)

All lanes : Anti-GSK3 beta antibody (ab227208) at 1/1000 dilution

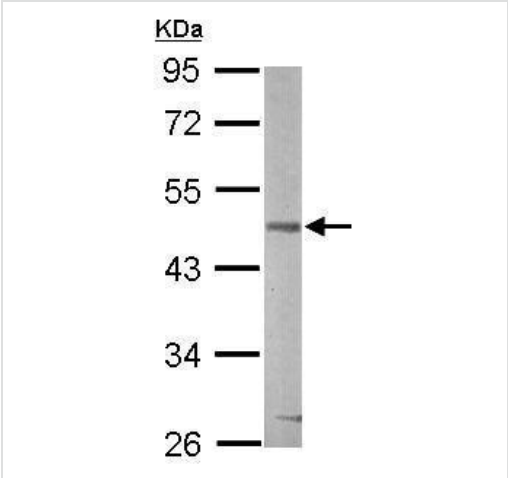
Lane 1 : Non-transfected HEK-293T (human epithelial cell line from embryonic kidney transformed with large T antigen) whole cell extract
Lane 2 : GSK3 beta shRNA transfected HEK-293T whole cell extract

Lysates/proteins at 30 µg per lane.

Secondary
All lanes : HRP-conjugated anti-rabbit IgG

Predicted band size: 46 kDa

10% SDS-PAGE gel.



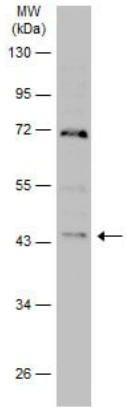
Western blot - Anti-GSK3 beta antibody (ab227208)

Anti-GSK3 beta antibody (ab227208) at 1/3000 dilution + Mouse brain lysate at 50 µg

Secondary
HRP-conjugated anti-rabbit IgG

Predicted band size: 46 kDa

10% SDS-PAGE gel.



Western blot - Anti-GSK3 beta antibody (ab227208)

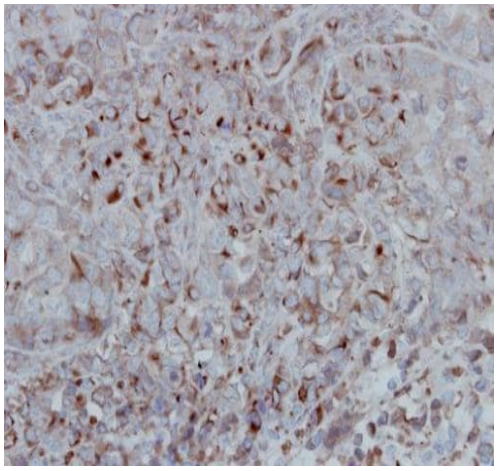
Anti-GSK3 beta antibody (ab227208) at 1/500 dilution + K562 (human chronic myelogenous leukemia cell line from bone marrow) whole cell extract at 30 µg

Secondary

HRP-conjugated anti-rabbit IgG

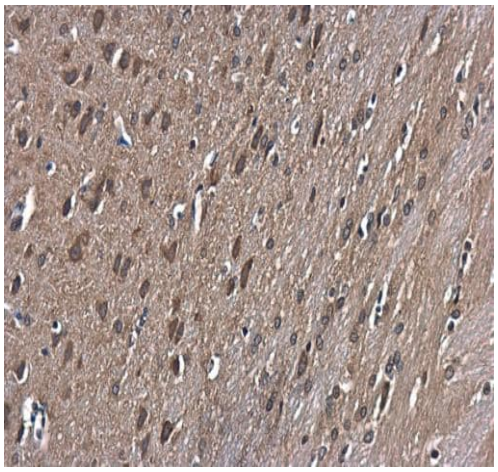
Predicted band size: 46 kDa

10% SDS-PAGE gel.



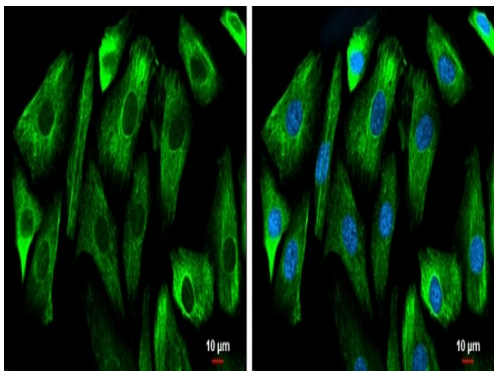
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GSK3 beta antibody (ab227208)

Paraffin-embedded H661 (human) xenograft tissue stained for GSK3 beta using ab227208 at 1/500 dilution in immunohistochemical analysis.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GSK3 beta antibody (ab227208)

Paraffin-embedded rat brain tissue stained for GSK3 beta using ab227208 at 1/500 dilution in immunohistochemical analysis.



Immunocytochemistry/ Immunofluorescence - Anti-GSK3 beta antibody (ab227208)

4% paraformaldehyde-fixed SK-N-SH (human neuroblastoma cell line) cells stained for GSK3 beta (green) using ab227208 at 1/400 dilution in ICC/IF.

Blue: Hoechst 33342 staining.

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

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