abcam

Product datasheet

Anti-Rab3A antibody ab3335

KO VALIDATED

11 Abreviews 16 References 3 Images

Overview

Product name	Anti-Rab3A antibody
Description	Rabbit polyclonal to Rab3A
Host species	Rabbit
Tested applications	**Suitable for:** WB, ICC/IF
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Synthetic peptide corresponding to Human Rab3A aa 1-18. Sequence: MASATDSRYGQKESSDQN (Peptide available as **ab4951**) Run BLAST with Run BLAST with
Positive control	WB: mouse brain, kidney, liver, rat brain, kidney, liver; ICC: HeLa 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 or -80°C. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.05% Sodium azide Constituent: 0.1% BSA
Purity	Protein A purified
Primary antibody notes	Rab proteins are low-molecular-weight GTP-binding proteins that form the largest branch of the

Ras superfamily of GTPases. Located on the cytoplasmic face of organelles and vesicles, rab proteins are involved in intracellular membrane fusion reactions. Three membrane proteins, synaptosomal associated protein of 25 kDa (SNAP-25), synaptobrevin and syntaxin, form the core of a ubiquitous membrane fusion machine that interacts with the soluble proteins N-ethylmaleimide-sensitive factor (NSF) and a-SNAP. Rab proteins, in co-ordination with the core fusion machinery and Munc-18, help to mediate vesicle docking and fusion. There exist over 40 rab proteins that have been described in mammals and the best studied is rab 3A. Rab 3A is found to be abundant in presynaptic nerve terminals and is also found to be crucial in acrosomal exocytosis in human spermatozoa. Abnormal accumulation of rab 3A in the cytoplasm of Purkinje cells has been reported in the prion protein related Creutzfeldt-Jakob disease.

Clonality Polyclonal

Isotype IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab3335 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	★★★★☆ (7)	Use a concentration of 2 µg/ml.
ICC/IF	★★★★☆ (1)	Use a concentration of 2 µg/ml.

Target

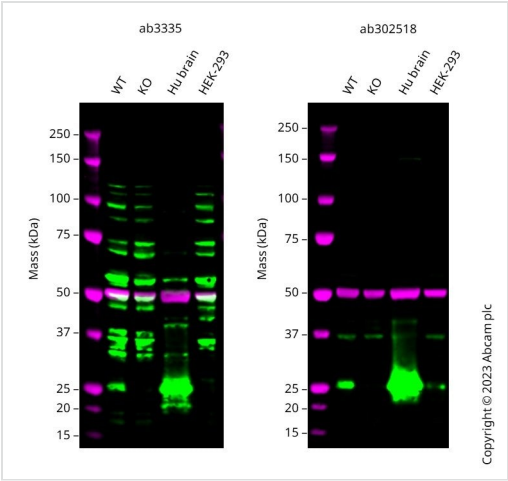
Function Involved in exocytosis by regulating a late step in synaptic vesicle fusion. Could play a role in neurotransmitter release by regulating membrane flow in the nerve terminal.

Tissue specificity Specifically expressed in brain.

Sequence similarities Belongs to the small GTPase superfamily. Rab family.

Cellular localization Cell membrane.

Images



Western blot - Anti-Rab3A antibody (ab3335)

All lanes : Left: ab3335 at 2 µg/mL.
Right: **ab302518** at 1/1000 dilution

Lane 1 : Wild-type SK-N-FI cell lysate
Lane 2 : RAB3A knockout SK-N-FI cell lysate
Lane 3 : Human brain cell lysate
Lane 4 : HEK-293 cell lysate

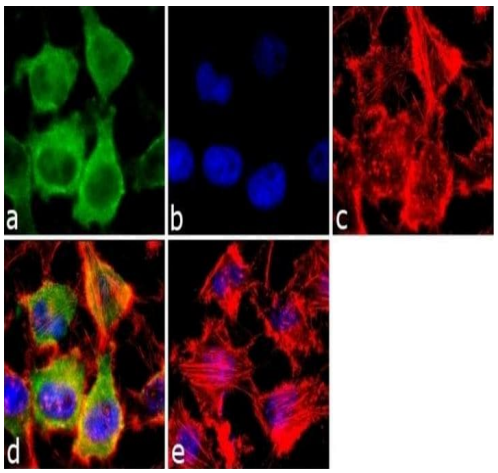
Lysates/proteins at 20 µg per lane.

Developed using the ECL technique.

Performed under reducing conditions.

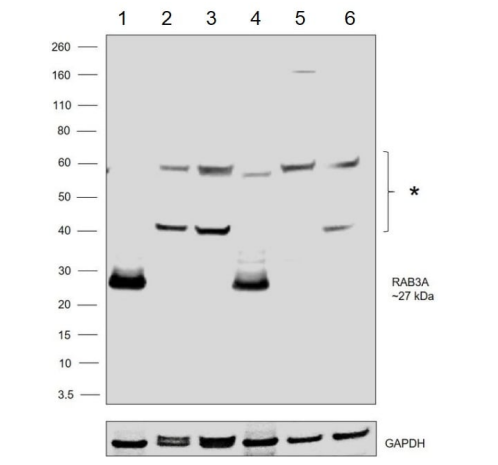
Observed band size: 27 kDa

Western blot: Left: Anti-RAB3A antibody (ab3335) staining at 2 ug/ml. Right: Recombinant Anti-Rab3A antibody [EPR26022-9] (**ab302518**) staining at 1/1000 dilution. Anti-Rab3A antibodies shown in green; Mouse anti-Alpha Tubulin [DM1A] (**ab7291**) loading control staining at 1/20000 dilution, shown in magenta. In Western blot, ab3335 and **ab302518** were shown to bind specifically to RAB3A. A band was observed at 27 kDa in wild-type SK-N-FI cell lysates with no signal observed at this size in RAB3A knockout cell line. To generate this image, wild-type and RAB3A knockout SK-N-FI cell lysates were analysed. First, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 3 % milk in TBS-0.1 % Tween$®$ 20 (TBS-T) before incubation with primary antibodies overnight at 4 °C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Rabbit IgG H&L 800CW and Goat anti-Mouse IgG H&L 680RD at 1/20000 dilution.



Immunocytochemistry/ Immunofluorescence - Anti-Rab3A antibody (ab3335)

Immunofluorescence analysis of RAB3A was done on 70% confluent log phase HeLa (Human epithelial adenocarcinoma cell line)
cells. The cells were fixed with 4% paraformaldehyde for 10 minutes, permeabilized with 0.1% Triton™ X-100 for 10 minutes, and blocked with 1% BSA for 1 hour at room temperature. The cells were labeled with ab3335 at 2 µg/mL in 0.1% BSA and incubated for 3 hours at room temperature and then labeled with Goat anti-Rabbit IgG (H+L) Superclonal™ Secondary Antibody, Alexa Fluor® 488 conjugate at 1/2000 dilution for 45 minutes at room temperature (Panel a: green). Nuclei (Panel b: blue) were stained with SlowFade® Gold Antifade Mountant with DAPI. F-actin (Panel c: red) was stained with Alexa Fluor® 555 Rhodamine Phalloidin at 1/300 dilution. Panel d is a merged image showing Cytoplasmic localization. Panel e is a no primary antibody control. The images were captured at 60X magnification.



Western blot - Anti-Rab3A antibody (ab3335)

All lanes : Anti-Rab3A antibody (ab3335) at 2 µg/ml

Lane 1 : Mouse brain tissue lysate
Lane 2 : Mouse kidney tissue lysate
Lane 3 : Mouse liver tissue lysate
Lane 4 : Rat brain tissue lysate
Lane 5 : Rat kidney tissue lysate
Lane 6 : Rat liver tissue lysate

Lysates/proteins at 30 µg per lane.

Secondary
All lanes : Rabbit anti-Goat IgG (H+L) Superclonal™ Recombinant Secondary Antibody, HRP at 1/4000 dilution

A 27 kDa band corresponding to RAB3A was observed along with two uncharacterized band (*) at ~40 kD and 60 kDa across tissues tested.

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

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