abcam

ab57154

Anti-Fox2 / RBM9 antibody [4G3]

Key facts

Isotype	IgG2a
Host species	Mouse
Storage buffer	pH: 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Recombinant Fragment Protein within Human RBFOX2 aa 1-100. The exact immunogen used to generate this antibody is proprietary information. Database link O43251
Clone number	4G3
Purity	Tissue culture supernatant
Light chain type	kappa

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	-
Notes	ab170191 - Mouse monoclonal IgG2a, is suitable for use as an isotype control with this antibody.

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

WB

Tested

Species	Mouse
Dilution info	-
Notes	-

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-P

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

ICC/IF

Tested

Species	Human

Dilution info	-
Notes	-

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information RBFOX2

Function	RNA-binding protein that regulates alternative splicing events by binding to 5'-UGCAUGU-3' elements. Prevents binding of U2AF2 to the 3'-splice site. Regulates alternative splicing of tissue-specific exons and of differentially spliced exons during erythropoiesis (By similarity). RNA-binding protein that seems to act as a coregulatory factor of ER-alpha. Together with RNA binding proteins RBPMS and MBNL1/2, activates vascular smooth muscle cells alternative splicing events (PubMed:37548402).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

This product was changed from ascites to tissue culture supernatant on 21/05/2019. Please note that the dilutions may need to be adjusted accordingly. If you have any questions, please do not hesitate to contact our scientific support team.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Fox2 also known as RBM9 is a protein involved in RNA splicing. It belongs to the Fox family of splicing factors and plays an important role in the regulation of alternative splicing. RBM9 has a mass of approximately 57 kDa. It is expressed in various tissues with notable expression in the brain heart and skeletal muscle. The presence of this protein in such tissues points to a role in neural muscular and cardiac function.
Biological function summary	RBM9 (Fox2) contributes to gene expression by influencing the splicing of pre-mRNA. It forms part of complex networks with other splicing-related proteins such as hnRNPs and SR proteins. Its function in alternative splicing impacts the diversity of protein isoforms which is important for cellular processes. This ability to modify gene expression patterns enables cellular adaptation to different physiological conditions.
Pathways	RBM9 interacts with key signaling cascades like PI3K/AKT and MAPK pathways. The protein aids in the regulation of genes involved in these pathways which are essential for cell growth and survival. RBM9 partners with other proteins such as AKT and ERK in these pathways facilitating their roles in cellular signaling. Its regulation of alternative splicing influences pathway outcomes contributing to normal and disease states.
Associated diseases and disorders	Malfunctions in RBM9 splicing regulation have links to neurodegenerative disorders like spinal muscular atrophy and cardiac conditions. RBM9's altered splicing patterns can result in disrupted neural and muscular functions. Its interactions with proteins such as SMN and MyoD connect RBM9 to these conditions indicating its influence on the severity and progression of related disorders. Understanding RBM9's role could offer insight into therapeutic targets for these diseases.

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

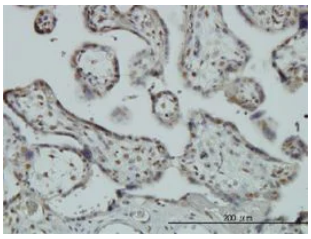
We do not recommend this combination. It is not covered by our product promise.

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.

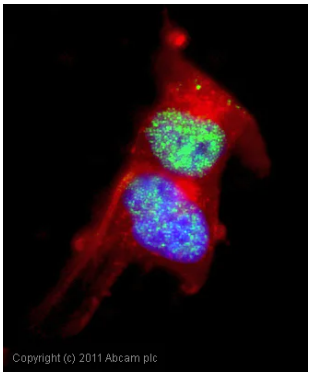
4 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Fox2 / RBM9 antibody [4G3] (ab57154)

Fox2 / RBM9 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-Fox2 / RBM9 antibody

Fox2 / RBM9 antibody (ab57154) used in immunohistochemistry at 3ug/ml on formalin fixed and paraffin embedded human placenta.
This image was generated using the ascites version of the product.

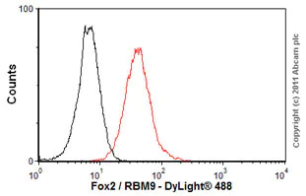


Immunocytochemistry/ Immunofluorescence - Anti-Fox2 / RBM9 antibody [4G3] (ab57154)

Fox2 / RBM9 Immunocytochemistry/ Immunofluorescence staining using mouse Anti-Fox2 / RBM9 antibody

ICC/IF image of ab57154 stained SHSY5Y cells. The cells were 4% formaldehyde fixed (10 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab57154, 1µg/ml) overnight at +4°C. The secondary antibody (green) was Alexa Fluor® 488 goat anti-mouse IgG (H+L) used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.

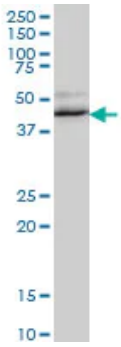
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Flow Cytometry - Anti-Fox2 / RBM9 antibody [4G3] (ab57154)

Fox2 / RBM9 Flow Cytometry staining using mouse Anti-Fox2 / RBM9 antibody

Overlay histogram showing HeLa cells stained with ab57154 (red line). The cells were fixed with 4% paraformaldehyde (10 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab57154, 1µg/1x10^6 cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (ab96879) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG2a [ICIGG2A] (ab91361, 1µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in HeLa cells fixed with 80% methanol (5 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.
This image was generated using the ascites version of the product.



Western blot - Anti-Fox2 / RBM9 antibody [4G3] (ab57154)

Fox2 / RBM9 Western blot staining using mouse Anti-Fox2 / RBM9 antibody

Fox2 / RBM9 antibody (ab57154) at 1ug/lane + NIH/3T3 cell lysate at 25ug/lane.
This image was generated using the ascites version of the product.

All lanes:
Western blot - Anti-Fox2 / RBM9 antibody [4G3] (ab57154)

Predicted band size: 41 kDa

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