abcam

Product datasheet

Anti-non-muscle Myosin IIA antibody [EPR8965] ab138498

KO VALIDATED Recombinant RabMAb

★★★★★ 1 Abreviews 1 References 6 Images

Overview

Product name	Anti-non-muscle Myosin IIA antibody [EPR8965]
Description	Rabbit monoclonal [EPR8965] to non-muscle Myosin IIA
Host species	Rabbit
Tested applications	**Suitable for:** WB, IHC-P, ICC/IF, Flow Cyt **Unsuitable for:** IP
Species reactivity	**Reacts with:** Human
Immunogen	Synthetic peptide within Human non-muscle Myosin IIA aa 1900-2000. The exact sequence is proprietary.
Positive control	HeLa, HT-29, Jurkat, HUVEC, Human fetal kidney, and A431 lysates, Human kidney and Human lung tissues, A431 and HeLa cells
General notes	Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMab® patents. This product is a recombinant rabbit monoclonal antibody.

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.
Storage buffer	Preservative: 0.01% Sodium azide Constituents: 9% PBS, 40% Glycerol, 0.05% BSA, 50% Tissue culture supernatant
Purity	Tissue culture supernatant
Clonality	Monoclonal
Clone number	EPR8965
Isotype	IgG

Applications

Our Abpromise guarantee covers the use of **ab138498** 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	★★★★★	1/1000 - 1/10000. Detects a band of approximately 230 kDa (predicted molecular weight: 227 kDa).
IHC-P		1/250 - 1/500. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.
ICC/IF		1/250 - 1/500.
Flow Cyt		1/10 - 1/100. ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Application notes Is unsuitable for IP.

Target

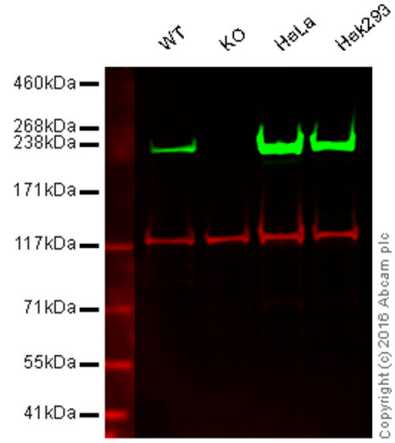
Function Cellular myosin that appears to play a role in cytokinesis, cell shape, and specialized functions such as secretion and capping.

Tissue specificity In the kidney, expressed in the glomeruli. Also expressed in leukocytes.

Involvement in disease Defects in MYH9 are the cause of May-Hegglin anomaly (MHA) [MIM:155100]. MHA is an autosomal dominant macrothrombocytopenia characterized by thrombocytopenia, giant platelets and leukokyte inclusions appearing as highly parallel paracrystalline bodies.
Defects in MYH9 are the cause of Sebastian syndrome (SBS) [MIM:605249]. SBS is an autosomal dominant macrothrombocytopenia characterized by thrombocytopenia, giant platelets and leukocyte inclusions that are smaller and less organized than in May-Hegglin anomaly.
Defects in MYH9 are the cause of Fechtner syndrome (FTNS) [MIM:153640]. FTNS is an autosomal dominant macrothrombocytopenia characterized by thrombocytopenia, giant platelets and leukocyte inclusions that are small and poorly organized. Additionally, FTNS is distinguished by Alport-like clinical features of sensorineural deafness, cataracts and nephritis.
Defects in MYH9 are the cause of Alport syndrome with macrothrombocytopenia (APSM) [MIM:153650]. APSM is an autosomal dominant disorder characterized by the association of ocular lesions, sensorineural hearing loss and nephritis (Alport syndrome) with platelet defects.
Defects in MYH9 are the cause of Epstein syndrome (EPS) [MIM:153650]. EPS is an autosomal dominant disorder characterized by the association of macrothrombocytopathy, sensorineural hearing loss and nephritis.
Defects in MYH9 are the cause of deafness autosomal dominant type 17 (DFNA17) [MIM:603622]. DFNA17 is a form of sensorineural hearing loss. Sensorineural deafness results from damage to the neural receptors of the inner ear, the nerve pathways to the brain, or the area of the brain that receives sound information. DFNA17 is characterized by progressive hearing impairment and cochleosaccular degeneration.
Defects in MYH9 are the cause of macrothrombocytopenia with progressive sensorineural deafness (MPSD) [MIM:600208]. MPSD is an autosomal dominant disorder characterized by the association of macrothrombocytopathy and progressive sensorineural hearing loss without renal dysfunction.

	Note=Subjects with mutations in the motor domain of MYH9 present with severe thrombocytopenia and develop nephritis and deafness before the age of 40 years, while those with mutations in the tail domain have a much lower risk of noncongenital complications and significantly higher platelet counts. The clinical course of patients with mutations in the four most frequently affected residues of MYH9 (responsible for 70% of MYH9-related cases) were evaluated. Mutations at residue 1933 do not induce kidney damage or cataracts and cause deafness only in the elderly, those in position 702 result in severe thrombocytopenia and produce nephritis and deafness at a juvenile age, while alterations at residue 1424 or 1841 result in intermediate clinical pictures. Note=Genetic variations in MYH9 are associated with non-diabetic end stage renal disease (ESRD).
Sequence similarities	Contains 1 IQ domain. Contains 1 myosin head-like domain.
Domain	The rodlike tail sequence is highly repetitive, showing cycles of a 28-residue repeat pattern composed of 4 heptapeptides, characteristic for alpha-helical coiled coils.
Post-translational modifications	ISGylated.

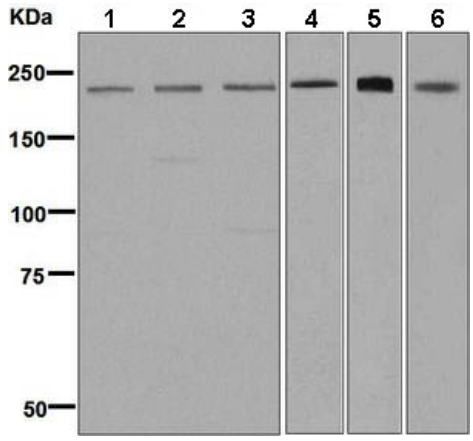
Images



Western blot - Anti-non-muscle Myosin IIA antibody [EPR8965] (ab138498)

Lane 1: Wild-type HAP1 cell lysate (20 µg)
Lane 2: non-muscle Myosin IIA knockout HAP1 cell lysate (20 µg)
Lane 3: HeLa cell lysate (20 µg)
Lane 4: HEK293 cell lysate (20 µg)
Lanes 1 - 4: Merged signal (red and green). Green - ab138498 observed at 230 kDa. Red - loading control, ab18058, observed at 124 kDa.

ab138498 was shown to specifically react with non-muscle Myosin IIA in wild-type HAP1 cells. No band was observed when non-muscle Myosin IIA knockout samples were examined. Wild-type and non-muscle Myosin IIA knockout samples were subjected to SDS-PAGE. ab138498 at a dilution of 1/1000 and ab18058 (loading control to Vinculin) at a dilution of 1/10,000 were incubated overnight at 4°C. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (ab216773) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (ab216776) secondary antibodies at 1/10,000 dilution for 1 hour at room temperature before imaging.



Western blot - Anti-non-muscle Myosin IIA antibody [EPR8965] (ab138498)

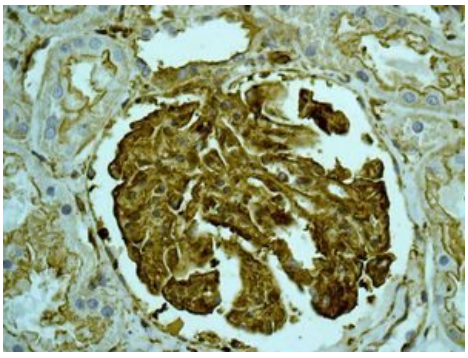
All lanes : Anti-non-muscle Myosin IIA antibody [EPR8965] (ab138498) at 1/1000 dilution

Lane 1 : HeLa lysate
Lane 2 : HT-29 lysate
Lane 3 : Jurkat lysate
Lane 4 : HUVEC lysate
Lane 5 : Human fetal kidney lysate
Lane 6 : A431 lysate

Lysates/proteins at 10 µg per lane.

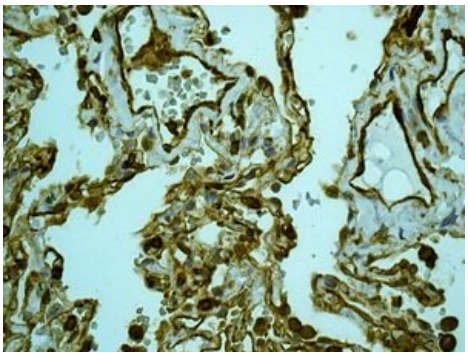
Secondary
All lanes : HRP labelled goat anti-rabbit at 1/2000 dilution

Predicted band size: 227 kDa
Observed band size: 230 kDa
why is the actual band size different from the predicted?



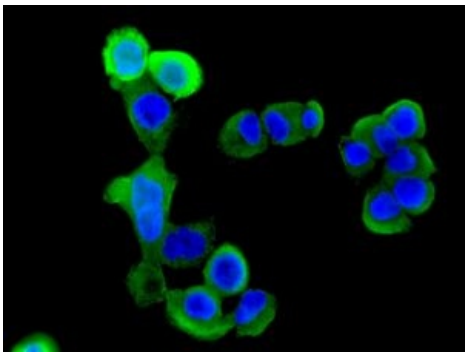
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-non-muscle Myosin IIA antibody [EPR8965] (ab138498)

Immunohistochemical analysis of paraffin embedded Human kidney tissue labelling non-muscle Myosin IIA with ab138498 antibody at a dilution of 1/250.



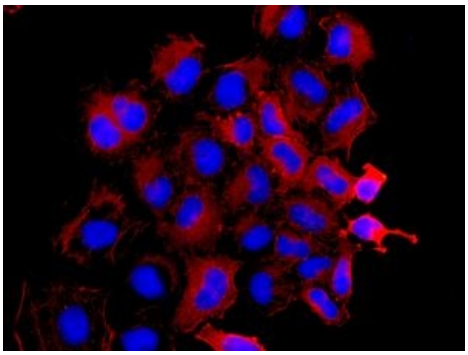
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-non-muscle Myosin IIA antibody [EPR8965] (ab138498)

Immunohistochemical analysis of paraffin embedded Human lung tissue labelling non-muscle Myosin IIA with ab138498 antibody at a dilution of 1/250.



Immunocytochemistry/ Immunofluorescence - Anti-non-muscle Myosin IIA antibody [EPR8965] (ab138498)

Immunofluorescent analysis of A431 cells labelling non-muscle Myosin IIA with ab138498 at 1/250 dilution.



Immunocytochemistry/ Immunofluorescence - Anti-non-muscle Myosin IIA antibody [EPR8965] (ab138498)

Immunofluorescent analysis of HeLa cells labelling non-muscle Myosin IIA with ab138498 at 1/250 dilution.

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