

Ryanodine Receptor Monoclonal Antibody (C3-33)

Product Details

Size	100 µg
Species	Amphibian, Dog, Chicken, Fish, Guinea pig, Human, Mouse, Rabbit, Rat
Published Species	Dog, Rabbit, Rat, Pig, Sheep, Human, Mouse
Expression System	Mouse / IgG1
Class	Monoclonal
Type	Antibody
Clone	C3-33
Conjugate	Unconjugated
Immunogen	Canine cardiac ryanodine receptor (RyR2)
Form	Liquid
Concentration	1 mg/mL
Purification	Protein G
Storage buffer	PBS
Contains	0.05% sodium azide
Storage Conditions	-20° C, Avoid Freeze/Thaw Cycles
RRID	AB_2183054

Applications	Tested Dilution	Publications
Flow Cytometry (Flow)	Assay dependent	-
Immunocytochemistry (ICC)	1:50	33 Publications
Immunofluorescence (IF)	Assay dependent	9 Publications
Immunohistochemistry (Frozen) (IHC (F))	1 µg/mL	3 Publications
Immunohistochemistry (Paraffin) (IHC (P))	1 µg/mL	-
Immunoprecipitation (IP)	Assay dependent	6 Publications
Western Blot (WB)	1 µg/mL	92 Publications
Immunohistochemistry (IHC)	-	23 Publications
Miscellaneous PubMed (Misc)	-	2 Publications
in situ PLA (PLA)	-	1 Publication

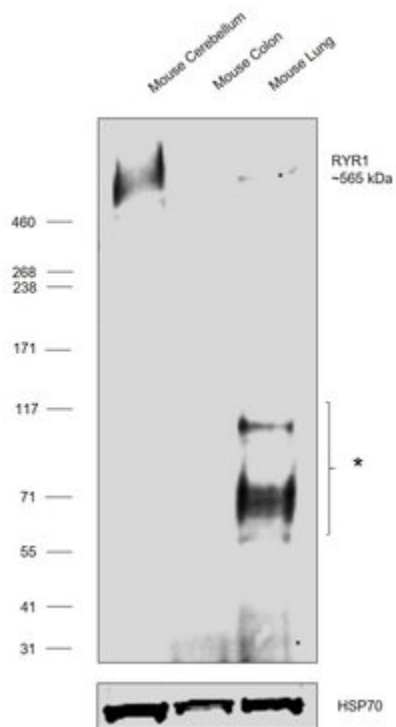
Product Specific Information

MA3-916 detects ryanodine receptor 2 (RyR2) and shows cross-reactivity with RyR1 in amphibian, canine, chicken, fish, guinea pig and rat tissues.

MA3-916 has been successfully used in Western blot, immunohistochemical, immunofluorescence, immunocytochemistry and immunoprecipitation procedures. By Western blot, this antibody detects a 565 kDa protein representing the ryanodine receptor. In non-mammalian vertebrates, a doublet is seen at 565 kDa representing the alpha and beta isoforms of the receptor.

Immunohistochemical staining of RyR in rat cardiac tissue with MA3-916 results in intense staining of the myofiber, which is consistent with sarcoplasmic reticulum localization.

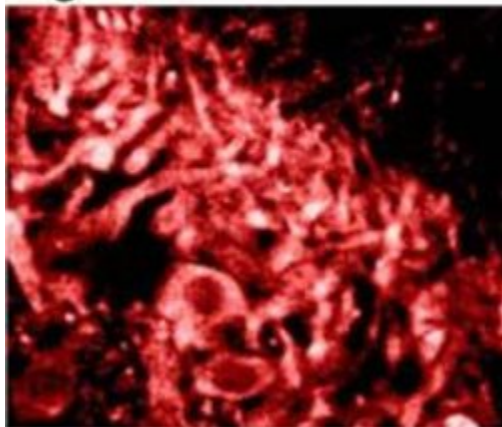
Advanced Verification Data



Ryanodine Receptor Antibody (MA3-916)

Antibody specificity was demonstrated by detection of differential basal expression of the target across tissues tested owing to their inherent genetic constitution. Relative expression of Ryanodine receptor 1 was observed in Mouse Cerebellum in comparison to Mouse colon and Mouse lung using Anti-Ryanodine Receptor Monoclonal Antibody (C3-33) (Product # MA3-916) in Western Blot. Relative expression validation info.

Fig. 1

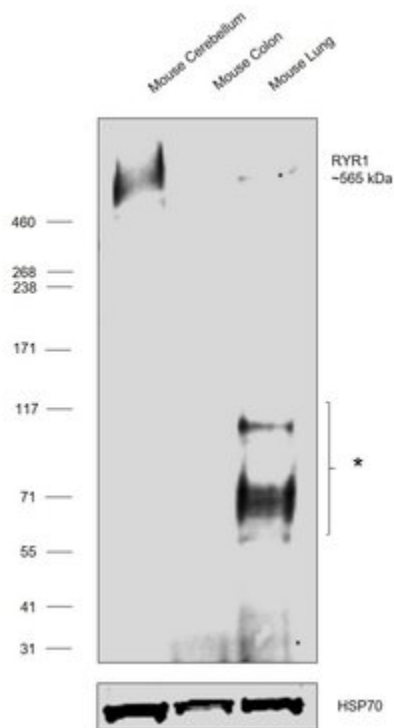


Ryanodine Receptor Antibody (MA3-916) in IHC

Immunofluorescent analysis of rat brain hippocampus tissue shows that Ryanodine Receptor Monoclonal Antibody (Product # MA3-916) crossreacts with RyR1.

Ryanodine Receptor Antibody (MA3-916) in WB

Western blot was performed using Anti-Ryanodine Receptor Monoclonal Antibody (C3-33) (Product # MA3-916) and a 565 kDa band corresponding to Ryanodine receptor 1 was observed along with two uncharacterized band (*) at ~70 kDa and 100 kDa across tissues tested. Tissue extracts (30 µg lysate) of Mouse Cerebellum (Lane 1), Mouse Colon (Lane 2) and Mouse Lung (Lane 3) were electrophoresed using NuPAGE™ 3-8% Tris-Acetate Protein Gel (Product # EA0378BOX). Resolved proteins were then transferred onto a Nitrocellulose membrane (Product # LC2001) by iBlot® 2 Dry Blotting System (Product # IB21001). The blot was probed with the primary antibody (1 µg/mL) and detected by chemiluminescence with Goat anti-Mouse IgG (H+L) Superclonal™ Recombinant Secondary Antibody, HRP (Product # A28177, 1:4000 dilution) using the iBright FL 1000 (Product # A32752). Chemiluminescent detection was performed using SuperSignal™ West Dura Extended Duration Substrate (Product # 34076).



Western Blot (92)

Frontiers in physiology

Impaired Activity of Ryanodine Receptors Contributes to Calcium Mishandling in Cardiomyocytes of Metabolic Syndrome Rats.

"MA3-916 was used in Western Blotting to show the impaired in situ activity of RyR2 may also account for the poor overall cardiac outcome reported in MetS patients; hence, the SERCA pump and RyR2 are both attractive potential targets for future therapies."

Authors: Fernández-Miranda G,Romero-Garcia T,Barrera-Lechuga TP,Mercado-Morales M,Rueda A

Species
Rat

Dilution
1:5,000

Year
2020

Frontiers in physiology

Pharmacological Modulation of Mitochondrial Ca²⁺ Content Regulates Sarcoplasmic Reticulum Ca²⁺ Release via Oxidation of the Ryanodine Receptor by Mitochondria-Derived Reactive Oxygen Species.

"MA3-916 was used in Western Blotting to study the effects of kaempferol, CGP-37157, and Ru360 in rat ventricular myocytes from control rats and rats with hypertrophy induced by thoracic aortic banding."

Authors: Hamilton S,Terentyeva R,Kim TY,Bronk P,Clements RT,O-Uchi J,Csordás G,Choi BR,Terentyev D

Species
Rat

Dilution
Not Cited

Year
2020

[View more WB references on thermofisher.com](#)

Immunofluorescence (9)

Frontiers in physiology

Axial Tubule Junctions Activate Atrial Ca²⁺ Release Across Species.

"MA3-916 was used in Immunohistochemistry-immunofluorescence to examine and quantitatively analyse the architecture of axial tubule membrane structures and associated Ca²⁺ signalling proteins across species from mouse to human."

Authors: Brandenburg S,Pawlowitz J,Fakuade FE,Kownatzki-Danger D,Kohl T,Mitronova GY,Scardigli M,Neef J,Schmidt C,Wiedmann F,Pavone FS,Sacconi L,Kutschka I,Sossalla S,Moser T,Voigt N,Lehnart SE

Species
Human
Mouse
Rat

Dilution
1:500
1:500
1:500

Year
2020

Frontiers in aging neuroscience

N-Acetylcysteine Prevents the Spatial Memory Deficits and the Redox-Dependent RyR2 Decrease Displayed by an Alzheimer's Disease Rat Model.

"MA3-916 was used in Immunohistochemistry-immunofluorescence to study the effects of amyloid beta oligomer injections directly into the hippocampus on type-2 ryanodine receptor expression and activation."

Authors: More J,Galusso N,Veloso P,Montecinos L,Finkelstein JP,Sanchez G,Bull R,Valdés JL,Hidalgo C,Paula-Lima A

Species
Rat

Dilution
1:1,000

Year
2020

[View more IF references on thermofisher.com](#)

More applications with references on thermofisher.com

IHC (23) PLA (1) ICC (33) IP (6) IHC (F) (3) Misc (2)

For Research Use Only. Not for use in diagnostic procedures. Not for resale without express authorization. Products are warranted to operate or perform substantially in conformance with published Product specifications in effect at the time of sale, as set forth in the Production documentation, specifications and/or accompanying package inserts ("Documentation"). No claim of suitability for use in applications regulated by FDA is made. The warranty provided herein is valid only when used by properly trained individuals. Unless otherwise stated in the Documentation, this warranty is limited to one year from date of shipment when the Product is subjected to normal, proper and intended usage. This warranty does not extend to anyone other than the Buyer. Any model or sample furnished to Buyer is merely illustrative of the general type and quality of goods and does not represent that any Product will conform to such model or sample. NO OTHER WARRANTIES, EXPRESS OR IMPLIED, ARE GRANTED INCLUDING WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR NON INFRINGEMENT. BUYER'S EXCLUSIVE REMEDY FOR NON-CONFORMING PRODUCTS DURING THE WARRANTY PERIOD IS LIMITED TO REPAIR, REPLACEMENT OF OR REFUND FOR THE NON-CONFORMING PRODUCT(S) AT SELLER'S SOLE OPTION. THERE IS NO OBLIGATION TO REPAIR, REPLACE OR REFUND FOR PRODUCTS AS THE RESULT OF (I) ACCIDENT, DISASTER OR EVENT OF FORCE MAJEURE, (II) MISUSE, FAULT OR NEGLIGENCE OF OR BY BUYER, (III) USE OF THE PRODUCTS IN A MANNER FOR WHICH THEY WERE NOT DESIGNED, OR (IV) IMPROPER STORAGE AND HANDLING OF THE PRODUCTS. Unless otherwise expressly stated on the Product or in the documentation accompanying the Product, the Product is intended for research only and is not to be used for any other purpose, including without limitation, unauthorized commercial uses, in vitro diagnostic uses, ex vivo or in vivo therapeutic uses, or any type of consumption by or application to human or animals.