

Rabbit RYR2 Polyclonal Antibody | anti-RYR2 antibody

Phospho-RYR2 (Ser2030) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA329237	Rabbit	Human, Mouse, Rat	ELISA, Immunocytochemistry, Immunofluorescence, Immunohistochemistry

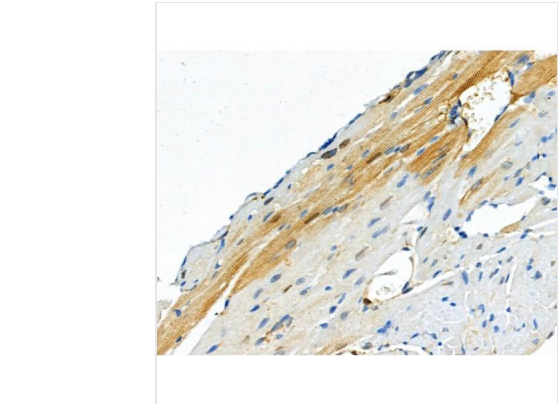
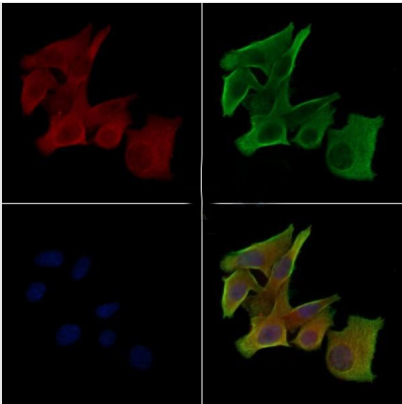
PRODUCT SYNONYMS

RYR2; Polyclonal Antibody; Phospho-RYR2 (Ser2030) Antibody; ARVC2; ARVD2; Cardiac muscle ryanodine receptor; Cardiac muscle ryanodine receptor-calcium release channel; hRYR-2; ryanodine receptor 2 (cardiac); Ryanodine receptor 2; RyR; RYR-2; RyR2; RYR2_HUMAN; Type 2 ryanodine receptor; VTSIP; anti-RYR2 antibody

PRODUCT SPECIFICATIONS

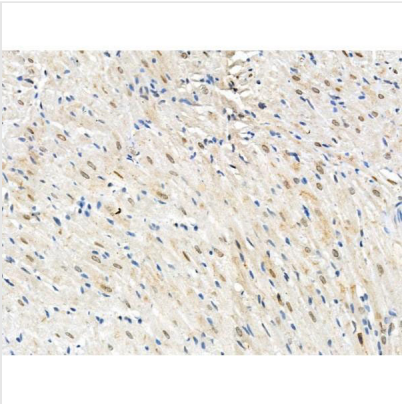
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Phospho-RYR2 (Ser2030) Antibody detects endogenous levels of RYR2 only when phosphorylated at Ser2030. Tissue Specificity: Detected in heart muscle (at protein level). Heart muscle, brain (cerebellum and hippocampus) and placenta.
Purity/Purification	The antibody is from purified rabbit serum by affinity purification via sequential chromatography on phospho-peptide and non-phospho-peptide affinity columns.
Form/Format	Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Applicable Applications for anti-RYR2 antibody	ELISA (Peptide ELISA), ICC (Immunocytochemistry), IF (Immunofluorescence), IHC (Immunohistochemistry)
Immunogen	A synthesized peptide derived from human RYR2 around the phosphorylation site of Ser2030.
Conjugation	Unconjugated
Fragment	Fab fragment
Post Translational Modifications	Channel activity is modulated by phosphorylation. Phosphorylation at Ser-2808 and Ser-2814 increases the open probability of the calcium channel. Phosphorylation is increased in failing heart, leading to calcium leaks and increased cytoplasmic Ca (2+) levels. Phosphorylation at Ser-2031 by PKA enhances the response to luminal calcium.
Subunit Structure	Homotetramer. Can also form heterotetramers with RYR1 and RYR3 (By similarity). Interacts with FKBP1A and FKBP1B; these interactions may stabilize the channel in its closed state and prevent Ca (2+) leaks. Interacts with CALM and S100A1; these interactions regulate channel activity. Identified in a complex composed of RYR2, FKBP1B, PKA catalytic subunit, PRKAR2A, AKAP6, and the protein phosphatases PP2A and PP1. Interacts directly with FKBP1B, PKA, PP1 and PP2A. Interacts with SELENON (By similarity). In cardiac muscles, identified in a complex, composed of FSD2, CMYA5 and RYR2 (By similarity).
Similarity	The calcium release channel activity resides in the C-terminal region while the remaining part of the protein resides in the cytoplasm. Belongs to the ryanodine receptor (TC 1.A.3.1) family. RYR2 subfamily.
Subcellular Location	Sarcoplasmic reticulum membrane>Multi-pass membrane protein. Membrane>Multi-pass membrane protein. Sarcoplasmic reticulum. Note: The number of predicted transmembrane domains varies between orthologs, but both N-terminus and C-terminus seem to be cytoplasmic.

IMAGES



IHC (Immunohistochemistry)
Staining Mouse heart tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.

Application Data
At 25 degree C. Samples were then incubated with primary Ab(At 37 degree C. An AlexaFluor594 conjugated goat anti-rabbit IgG(H+L) Ab(Red) and an AlexaFluor488 conjugated goat anti-mouse IgG(H+L) Ab(Green) were used as the secondary antibody. The nuclear counter stain is DAPI (blue).



IHC (Immunohistochemistry)
At 1/100 staining Rat heart tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.

ADDITIONAL INFORMATION

Related Product Information for anti-RYR2 antibody	Calcium channel that mediates the release of Ca (2+) from the sarcoplasmic reticulum into the cytoplasm and thereby plays a key role in triggering cardiac muscle contraction. Aberrant channel activation can lead to cardiac arrhythmia. In cardiac myocytes, calcium release is triggered by increased Ca (2+) levels due to activation of the L-type calcium channel CACNA1C. The calcium channel activity is modulated by formation of heterotetramers with RYR3. Required for cellular calcium ion homeostasis. Required for embryonic heart development.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	112799847
NCBI GeneID	6262
NCBI Accession #	NP_001026.2
NCBI GenBank Nucleotide #	NM_001035.2
UniProt Accession #	Q92736; Q15411; Q546N8; Q5T3P2

Molecular Weight	564,567 Da
NCBI Official Full Name	ryanodine receptor 2
NCBI Official Synonym Full Names	ryanodine receptor 2 (cardiac)
NCBI Official Symbol	RYR2
NCBI Official Synonym Symbols	RyR; ARVC2; ARVD2; RYR-2; VTSIP
NCBI Protein Information	ryanodine receptor 2; type 2 ryanodine receptor; islet-type ryanodine receptor; kidney-type ryanodine receptor; cardiac-type ryanodine receptor; cardiac muscle ryanodine receptor-calcium release channel
UniProt Protein Name	Ryanodine receptor 2
UniProt Gene Name	RYR2
UniProt Synonym Gene Names	RYR-2; RyR2; hRYR-2
UniProt Entry Name	RYR2_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/ryr2-antibody-peptide-elisa-immunocytochemistry-immunofluorescence-immunohistochemistry-elisa/329237>