

## Recombinant Ryanodine Receptor Monoclonal Antibody

catalog number: AN301983L

**Note:** Centrifuge before opening to ensure complete recovery of vial contents.

### Description

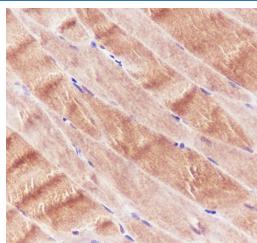
|              |   |
|--------------|---|
| Reactivity   | Human;Rat;Mouse   |
| Immunogen    | Peptide. This information is proprietary to PTMab.              |
| Host         | Rabbit  |
| Isotype      | IgG, κ  |
| Clone        | A703  |
| Purification | Protein A purified  |
| Buffer       | PBS, 50% glycerol, 0.05% Proclin 300, 0.05% protein protectant. |

### Applications

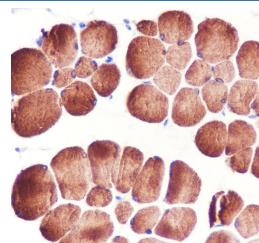
### Recommended Dilution

|     |              |
|-----|--------------|
| IHC | 1:500-1:1000 |
|-----|--------------|

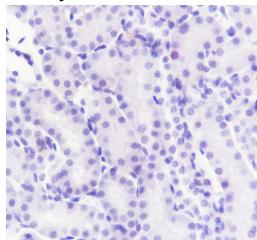
### Data



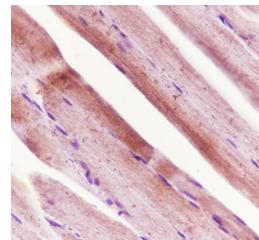
Immunohistochemistry of paraffin-embedded Human skeletal muscle using Ryanodine Receptor Monoclonal Antibody at dilution of 1:1000.



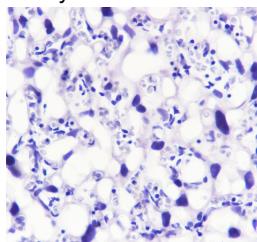
Immunohistochemistry of paraffin-embedded Mouse skeletal muscle using Ryanodine Receptor Monoclonal Antibody at dilution of 1:1000.



Immunohistochemistry of paraffin-embedded Mouse kidney (negative tissue) using Ryanodine Receptor Monoclonal Antibody at dilution of 1:1000.



Immunohistochemistry of paraffin-embedded Rat skeletal muscle using Ryanodine Receptor Monoclonal Antibody at dilution of 1:1000.



Immunohistochemistry of paraffin-embedded Rat placenta (negative tissue) using Ryanodine Receptor Monoclonal Antibody at dilution of 1:1000.

### Preparation & Storage

#### Storage

Store at -20°C Valid for 12 months. Avoid freeze / thaw cycles.

### For Research Use Only

Toll-free: 1-888-852-8623

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Rev. V1.1

### Shipping

Ice bag

### Background

Ryanodine receptors (RyRs) are large (>500 kDa), intracellular calcium channels found in the sarcoplasmic/endoplasmic reticulum membrane and are responsible for the release of Ca<sup>2+</sup> from intracellular stores in excitable cells, such as muscle and neurons. RyRs exist as three mammalian isoforms (RyR1-3), all of which form homotetramers regulated by phosphorylation and/or direct or indirect interaction with a variety of proteins (L-type calcium channels, PKA, FKBP12/12.6, CaMKII, calmodulin, calsequestrin, junctin, and triadin) and ions (Mg<sup>2+</sup> and Ca<sup>2+</sup>). Regulation of the RyR channel by protein modulators occurs within the large cytoplasmic domain, whereas the carboxy terminal portion of the protein forms the ion-binding and conducting pore. RyR1 and RyR2 are predominantly expressed in skeletal and cardiac muscle, respectively, where they localize exclusively to the sarcoplasmic reticulum (SR) and facilitate calcium-mediated communication between transverse-tubules and sarcoplasmic reticulum. Contraction of skeletal muscle is triggered by release of calcium ions from the SR following depolarization of T-tubules. Research studies have shown that defects in RyR1 are the cause of malignant hyperthermia susceptibility type 1 (MHS1), central core disease of muscle (CCD), multimicore disease with external ophthalmoplegia, and congenital myopathy with fiber-type disproportion (CFTD), each of which is manifested by defects in muscle function, metabolism, and development.

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