

## Product datasheet for **TA329026**

### Ryanodine Receptor 3 (RYR3) Rabbit Polyclonal Antibody

#### Product data:

Product Type:	Primary Antibodies
Applications:	IHC, WB
Recommended Dilution:	WB: 1:200-1:2000; IHC: 1:100-1:3000
Reactivity:	Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Peptide CHIAHVNPAAEEDLK, corresponding to amino acid residues 935-949 of human Ryanodine Receptor 3. Intracellular, N-terminus.
Formulation:	Lyophilized. Concentration before lyophilization ~0.8mg/ml (lot dependent, please refer to CoA along with shipment for actual concentration). Buffer before lyophilization: Phosphate buffered saline (PBS), pH 7.4, 1% BSA, 0.05% NaN3.
Reconstitution Method:	Add 50 ul double distilled water (DDW) to the lyophilized powder.
Purification:	Affinity purified on immobilized antigen.
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	ryanodine receptor 3
Database Link:	<a href="#">NP_001027</a> <a href="#">Entrez Gene 6263 Human</a> <a href="#">Q15413</a>

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**Background:**

It is well established that cytosolic calcium ( $\text{Ca}^{2+}$ ) acts as a key second messenger in many intracellular pathways including synaptic transmission, muscle contraction, hormonal secretion, cell growth and proliferation. The primary intracellular  $\text{Ca}^{2+}$  storage/release organelles in most cells is the endoplasmic reticulum (ER) or the sarcoplasmic reticulum (SR) in striated muscle cells. The ER and SR contain two  $\text{Ca}^{2+}$  release channel families, the Inositol trisphosphate receptors (IP3Rs) and the Ryanodine receptors (RyRs). The Ryanodine receptor family consists of three different isoforms: The skeletal muscle isoform, Ryanodine Receptor type 1 (RyR1); the cardiac muscle isoform, Ryanodine Receptor type 2 (RyR2) and the brain isoform, Ryanodine Receptor type 3 (RyR3). The Ryanodine receptors are homotetrameric proteins generating a  $\text{Ca}^{2+}$  conducting channel. They play a key role in the mechanism of excitation-contraction coupling in striated muscle. Binding of Ryanodine (poisonous alkaloid found in the South American plant *Ryania speciosa* to the Ryanodine receptor causes two major changes in the channel: a reduction in single-channel conductance and a marked increase in the open state probability, leading to an overall increase/decrease in the  $\text{Ca}^{2+}$  release capability of the channel. RyR3 is the most widely expressed RyR channel which is predominantly expressed in smooth muscle tissues and certain regions of the brain.

**Synonyms:**

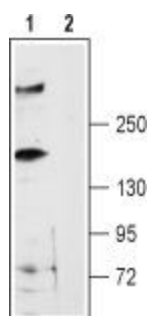
RyR-3

**Protein Families:**

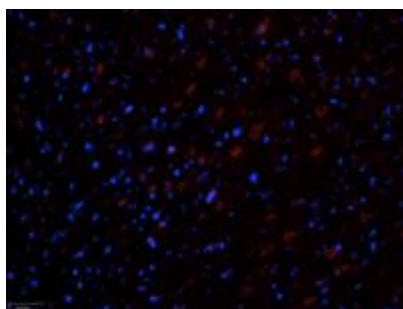
Druggable Genome, Transmembrane

**Protein Pathways:**

Alzheimer's disease, Calcium signaling pathway

**Product images:**


Western blot analysis of rat brain membranes: 1. Anti-Ryanodine Receptor 3 antibody, (1:200). 2. Anti-Ryanodine Receptor 3 antibody, preincubated with the control peptide antigen.



Expression of Ryanodine Receptor 3 in rat cortex. Immunohistochemical staining of rat brain frozen sections with Anti-Ryanodine Receptor 3 antibody, (red), (1:100). Ryanodine Receptor 3 is widely expressed in neurons of the cortex. Hoechst 33342 is used as the counterstain.