

**P2X7 Receptor (E1E8T) Rabbit mAb**

**Orders:** 877-616-CELL (2355)  
orders@cellsignal.com

**Support:** 877-678-TECH (8324)

**Web:** info@cellsignal.com  
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

**For Research Use Only. Not for Use in Diagnostic Procedures.**

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP	H	Endogenous	78	Rabbit IgG	#Q99572	5027

**Product Usage Information****Application**

Western Blotting  
Immunoprecipitation

**Dilution**

1:1000  
1:50

**Storage**

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

**Specificity/Sensitivity  
Source / Purification**

P2X7 Receptor (E1E8T) Rabbit mAb recognizes endogenous levels of total P2X7 receptor protein.

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu462 of human P2X7 receptor protein.

**Background**

P2X purinergic receptors are ATP-gated ion channels involved in physiological processes that include inflammation, afferent sensory signaling, and sympathetic motor nerve activity. Seven different vertebrate genes (*P2RX1-P2RX7*) encode for individual receptor protein subunits (1). All P2X subunit proteins share similar protein domain structure, but can differ in overall protein length from 384 to 595 amino acids. Each P2X subunit is composed of amino- and carboxy-terminal intracellular domains, two transmembrane domains, and a large extracellular loop that contains ten evenly spaced cysteines and multiple glycosylation sites (2). P2X receptors are found in a variety of cell types and tissues, including central and peripheral nervous system neurons and glial cells, autonomic and sensory neurons, bone, muscle, and hematopoietic tissues (1). Purinoceptor 7 (P2X7) is a homotrimer involved in diverse cellular responses, including inflammation mediated by phospholipase A2, phospholipase D, MAP kinase, and NF-κB activation (3,4). Research studies suggest that P2X7 receptors promote apoptosis by regulating release of IL-1β in neurodegenerative disorders associated with inflammation (5). Microglial P2X7 receptors may contribute to neuroinflammatory responses in the ATP-rich site of neuronal injury (6) and mediate inflammatory pain (7, 8). Association studies demonstrate a possible causal link between *P2RX7* gene polymorphisms and susceptibility to bipolar affective disorder and major depressive disorder (9,10).

**Background References**

1. North, R.A. (2002) *Physiol Rev* 82, 1013-67.
2. Valera, S. et al. (1994) *Nature* 371, 516-9.
3. North, R.A. and Surprenant, A. (2000) *Annu Rev Pharmacol Toxicol* 40, 563-80.
4. Skaper, S.D. et al. (2010) *FASEB J* 24, 337-45.
5. Bernardino, L. et al. (2008) *J Neurochem* 106, 271-80.
6. Volonté, C. et al. (2003) *Curr Drug Targets CNS Neurol Disord* 2, 403-12.
7. Chessell, I.P. et al. (2005) *Pain* 114, 386-96.
8. Dell'Antonio, G. et al. (2002) *Neurosci Lett* 327, 87-90.
9. Barden, N. et al. (2006) *Am J Med Genet B Neuropsychiatr Genet* 141B, 374-82.
10. Lucae, S. et al. (2006) *Hum Mol Genet* 15, 2438-45.

**Species Reactivity**

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

**Western Blot Buffer**

**IMPORTANT:** For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

**Applications Key**

**W:** Western Blotting **IP:** Immunoprecipitation

**Cross-Reactivity Key**

**H:** Human

**Trademarks and Patents**

Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc.

XP is a registered trademark of Cell Signaling Technology, Inc.

All other trademarks are the property of their respective owners. Visit [cellsignal.com/trademarks](http://cellsignal.com/trademarks) for more information.

## Limited Uses

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.

**Orders: 877-616-CELL (2355) • [orders@cellsignal.com](mailto:orders@cellsignal.com) • Support: 877-678-TECH (8324) • [info@cellsignal.com](mailto:info@cellsignal.com) • Web: [cellsignal.com](http://cellsignal.com)**  
For Research Use Only. Not for Use in Diagnostic Procedures.