

**#2766** Store at -20C

## PKR (N216) Antibody


**Cell Signaling**  
TECHNOLOGY®

**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.**

<b>Applications:</b> WB	<b>Reactivity:</b> H	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 74	<b>Source:</b> Rabbit	<b>UniProt ID:</b> #P19525	<b>Entrez-Gene Id:</b> 5610
----------------------------	-------------------------	-----------------------------------	------------------------	--------------------------	-------------------------------	--------------------------------

<b>Product Usage Information</b>	<b>Application</b> Western Blotting	<b>Dilution</b> 1:1000
<b>Storage</b>	Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.	
<b>Specificity / Sensitivity</b>	PKR (N216) Antibody detects endogenous levels of total PKR protein.	
<b>Source / Purification</b>	Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to the sequence of human PKR. Antibodies are purified by protein A and peptide affinity chromatography.	
<b>Background</b>	Protein kinase R (PKR) is transcriptionally induced by interferon and activated by double-stranded RNA (dsRNA). PKR inhibits translation initiation through phosphorylation of the α subunit of the initiation factor eIF2 (eIF2α) and also controls the activation of several transcription factors, such as NF-κB, p53, and the Stats. In addition, PKR mediates apoptosis induced by many different stimuli, such as LPS, TNF-α, viral infection, and serum starvation (1,2). Activation of PKR by dsRNA results in PKR dimerization and autophosphorylation of Thr446 and Thr451 in the activation loop. Substitution of threonine for alanine at position 451 completely inactivated PKR, while a mutant with a threonine to alanine substitution at position 446 was partially active (3). Research studies have implicated PKR activation in the pathologies of neurodegenerative diseases, including Alzheimer's disease (4,5).	
<b>Background References</b>	1. Williams, B.R. (1999) <i>Oncogene</i> 18, 6112-6120. 2. Gil, J. and Esteban, M. (2000) <i>Apoptosis</i> 5, 107-114. 3. Romano, P. R. et al. (1998) <i>Mol. Cell. Biol.</i> 18, 2282-2297. 4. Peel, A.L. and Bredesen, D.E. (2003) <i>Neurobiol Dis</i> 14, 52-62. 5. Peel, A.L. (2004) <i>J Neuropathol Exp Neurol</i> 63, 97-105.	

<b>Species Reactivity</b>	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
<b>Western Blot Buffer</b>	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.
<b>Applications Key</b>	<b>WB:</b> Western Blotting
<b>Cross-Reactivity Key</b>	<b>H:</b> human <b>M:</b> mouse <b>R:</b> rat <b>Hm:</b> hamster <b>Mk:</b> monkey <b>Vir:</b> virus <b>Mi:</b> mink <b>C:</b> chicken <b>Dm:</b> D. melanogaster <b>X:</b> Xenopus <b>Z:</b> zebrafish <b>B:</b> bovine <b>Dg:</b> dog <b>Pg:</b> pig <b>Sc:</b> S. cerevisiae <b>Ce:</b> C. elegans <b>Hr:</b> horse <b>GP:</b> Guinea Pig <b>Rab:</b> rabbit <b>All:</b> all species expected
<b>Trademarks and Patents</b>	Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc. All other trademarks are the property of their respective owners. Visit cellsignal.com/trademarks for more information.
<b>Limited Uses</b>	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.