

#4352 Store at -20°C

# Hck 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.**

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB	H M Mk	Endogenous	61	Rabbit	#P08631	3055

<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>	Hck Antibody detects endogenous levels of total Hck protein. This antibody does not cross-react with family members Src, Lyn and Fyn.	
<b>Source / Purification</b>	Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to amino-terminal residues of human Hck. Antibodies are purified by protein A and peptide affinity chromatography	
<b>Background</b>	<p>The hematopoietic cell kinase (Hck) is a Src family protein tyrosine kinase that is prominently expressed in lymphoid and myeloid lineages of hematopoiesis (1). The Hck kinase participates in transduction of a variety of extracellular signals that affect cellular processes, including cell proliferation, differentiation, and migration. Hck protein structure includes a relatively divergent amino-terminal "unique" domain that is subject to post-translational lipid modifications and targets Hck to the plasma membrane. Src homology 3 (SH3) and 2 (SH2) domains, and a tyrosine kinase catalytic domain are adjacent to the "unique" domain. Research studies indicate that phosphorylation of conserved tyrosine residues positively and negatively regulate Hck catalytic activity. Phosphorylation of Hck at the conserved, carboxy-terminal Tyr499 by protein kinase Csk promotes an interaction between the phosphorylated tyrosine and the SH2 domain, rendering Hck inactive. Disruption of this interaction through dephosphorylation, the replacement of the Tyr522 with phenylalanine, or carboxy-terminal truncation mutations, results in constitutive activation of Hck. Autophosphorylation of Tyr411 within the kinase domain positively regulates Hck catalytic activity. Thus, the activation of Hck requires both disruption of the regulatory tyrosine-SH2 domain interaction and autophosphorylation of the regulatory tyrosine residue within the kinase domain (2,3). The dysfunction or dysregulation of Hck may contribute to the pathogenesis of some human forms of leukemia (4).</p>	
<b>Background References</b>	<ol style="list-style-type: none"> <li>1. Karasek, M. et al. (1978) <i>Cell Tissue Res</i> 195, 547-56.</li> <li>2. Ziegler, S.F. et al. (1989) <i>Mol Cell Biol</i> 9, 2724-7.</li> <li>3. Kefalas, P. et al. (1995) <i>Int J Biochem Cell Biol</i> 27, 551-63.</li> <li>4. Hu, Y. et al. (2004) <i>Nat Genet</i> 36, 453-61.</li> </ol>	

<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 <a href="http://cellsignal.com/trademarks">cellsignal.com/trademarks</a> 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.