

#14192 Store at +4°C

## Btk (D3H5) Rabbit mAb (PE Conjugate)



**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><br>FC-FP | <b>Reactivity:</b><br>H M | <b>Sensitivity:</b><br>Endogenous | <b>Source/Isotype:</b><br>Rabbit IgG | <b>UniProt ID:</b><br>#Q06187 | <b>Entrez-Gene Id:</b><br>695 |
|-------------------------------|---------------------------|-----------------------------------|--------------------------------------|-------------------------------|-------------------------------|

|  |   |                         |
|--|---|-------------------------|
| <b>Product Usage Information</b>                                   | <b>Application</b><br>Flow Cytometry (Fixed/Permeabilized)  | <b>Dilution</b><br>1:50 |
| <b>Storage</b>   | Supplied in PBS (pH 7.2), less than 0.1% sodium azide and 2 mg/ml BSA. Store at 4°C. Do not aliquot the antibodies. Protect from light. Do not freeze.  |                         |
| <b>Specificity / Sensitivity</b>                                   | Btk (D3H5) Rabbit mAb (PE Conjugate) recognizes endogenous levels of total Btk protein.   |                         |
| <b>Species predicted to react based on 100% sequence homology:</b> | Rat, Hamster, Bovine, Dog, Pig, Horse   |                         |
| <b>Source / Purification</b>                                       | Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Asp195 of human Btk protein.   |                         |
| <b>Product Description</b>   | This Cell Signaling Technology antibody is conjugated to phycoerythrin (PE) and tested in-house for direct flow cytometry analysis in human cells. The antibody is expected to exhibit the same species cross-reactivity as the unconjugated Btk (D3H5) Rabbit mAb #8547.   |                         |
| <b>Background</b>  | <p>Bruton's tyrosine kinase (Btk) is a member of the Btk/Tec family of cytoplasmic tyrosine kinases. Like other Btk family members, it contains a pleckstrin homology (PH) domain and Src homology SH3 and SH2 domains. Btk plays an important role in B cell development (1,2). Activation of B cells by various ligands is accompanied by Btk membrane translocation mediated by its PH domain binding to phosphatidylinositol-3,4,5-trisphosphate (3-5). The membrane-localized Btk is active and associated with transient phosphorylation of two tyrosine residues, Tyr551 and Tyr223. Tyr551 in the activation loop is transphosphorylated by the Src family tyrosine kinases, leading to autophosphorylation at Tyr223 within the SH3 domain, which is necessary for full activation (6,7). The activation of Btk is negatively regulated by PKCβ through phosphorylation of Btk at Ser180, which results in reduced membrane recruitment, transphosphorylation, and subsequent activation (8). The PKC inhibitory signal is likely to be a key determinant of the B cell receptor signaling threshold to maintain optimal Btk activity (8).</p> |                         |
| <b>Background References</b>                                       | <ol style="list-style-type: none"> <li>1. Khan, W.N. (2001) <i>Immunol Res</i> 23, 147-56.</li> <li>2. Lewis, C.M. et al. (2001) <i>Curr Opin Immunol</i> 13, 317-25.</li> <li>3. Salim, K. et al. (1996) <i>EMBO J</i> 15, 6241-50.</li> <li>4. Rameh, L.E. et al. (1997) <i>J Biol Chem</i> 272, 22059-66.</li> <li>5. Várnai, P. et al. (1999) <i>J Biol Chem</i> 274, 10983-9.</li> <li>6. Rawlings, D.J. et al. (1996) <i>Science</i> 271, 822-5.</li> <li>7. Park, H. et al. (1996) <i>Immunity</i> 4, 515-25.</li> <li>8. Kang, S.W. et al. (2001) <i>EMBO J</i> 20, 5692-702.</li> </ol>  |                         |

|                             |   |
|-----------------------------|---|
| <b>Species Reactivity</b>   | Species reactivity is determined by testing in at least one approved application (e.g., western blot).  |
| <b>Applications Key</b>     | <b>FC-FP:</b> Flow Cytometry (Fixed/Permeabilized)  |
| <b>Cross-Reactivity Key</b> | <p><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<br/> <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<br/> <b>GP:</b> Guinea Pig <b>Rab:</b> rabbit <b>All:</b> all species expected</p> |

**Trademarks and Patents**

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](https://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.