

**#12109** Store at -20°C

## Bora (D2B9) Rabbit mAb


**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/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP, FC-FP	H	Endogenous	80	Rabbit IgG	#Q6PGQ7	79866

### Product Usage Information

#### Application

Western Blotting  
Immunoprecipitation  
Flow Cytometry (Fixed/Permeabilized)

#### Dilution

1:1000  
1:50  
1:200

### 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

Bora (D2B9) Rabbit mAb recognizes endogenous levels of total Bora protein.

### Source / Purification

Monoclonal antibody is produced by immunizing animals with a recombinant protein specific to the carboxy terminus of human Bora protein.

### Background

The eukaryotic cell cycle is carefully controlled by protein phosphorylation involving a number of phosphatases, kinases, and co-factors. Cyclin-dependent kinases (CDKs/cdcs), Polo-like kinases (PLKs), and Aurora kinases have been shown to be major regulators of mitotic control (reviewed in 1,2). Protein aurora borealis (Bora), a co-factor of Aurora-A first identified in *Drosophila*, also plays a key roll in cell cycle progression (3). Bora levels are low in G0/G1, increasing in S-phase and peaking at G2 (4). Found to be conserved from *C. elegans* to humans, Bora is translocated from the nucleus to the cytoplasm upon activation of cdc2 at the onset of mitosis. Once present in the cytoplasm, Bora binds to and activates Aurora-A and PLK1 (3-5). It has been proposed that the binding of human Bora to PLK1 may lead to a conformational change in the protein that disrupts the autoinhibition by the Polo-Box Domain (PBD). This would allow for Thr210 on PLK1 to become more accessible for phosphorylation by Aurora-A (reviewed in 6). Active PLK1 then initiates the PLK1-cdc25-cdc2 positive feedback loop, leading to mitotic entry and the phosphorylation of Bora. Once phosphorylated in prophase, Bora is degraded allowing for normal mitotic progression (7).

### Background References

1. Nigg, E.A. (2001) *Nat Rev Mol Cell Biol* 2, 21-32.
2. Archambault, V. and Carmena, M. (2012) *Cell Cycle* 11, 1490-5.
3. Hutterer, A. et al. (2006) *Dev Cell* 11, 147-57.
4. Seki, A. et al. (2008) *Science* 320, 1655-8.
5. Chan, E.H. et al. (2008) *Chromosoma* 117, 457-69.
6. Macurek, L. et al. (2009) *Cancer Res* 69, 4555-8.
7. Seki, A. et al. (2008) *J Cell Biol* 181, 65-78.

### 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

**WB:** Western Blotting **IP:** Immunoprecipitation **FC-FP:** Flow Cytometry (Fixed/Permeabilized)

### Cross-Reactivity Key

**H:** human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster  
**X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse  
**GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

**Trademarks and Patents**

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

Alexa Fluor is a registered trademark of Life Technologies Corporation.

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.