



**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

#2089 Store at -20C

## MCF2/Dbl Antibody

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

<b>Applications:</b> W	<b>Reactivity:</b> H M R	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 100	<b>Source/Isotype:</b> Rabbit	<b>UniProt ID:</b> #P10911	<b>Entrez-Gene Id:</b> 4168
---------------------------	-----------------------------	-----------------------------------	-------------------------	----------------------------------	-------------------------------	--------------------------------

### Product Usage Information

#### Application

Western Blotting

#### Dilution

1:1000

### Storage

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.

### Specificity/Sensitivity

MCF2/Dbl Antibody recognizes endogenous levels of total MCF2/Dbl protein. Based on amino acid sequence homology, the antibody is expected to recognize splice variants 1-4 of human MCF2/Dbl. The antibody is not expected to recognize the onco-Dbl protein formed through amino-terminal truncation.

### Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to the amino terminus of human MCF2/Dbl. Antibodies are purified using protein A and peptide affinity chromatography.

### Background

The MCF2/Dbl proto-oncogene product is the founding member of the Dbl family of Rho guanine nucleotide exchange factors (GEFs) that are characterized by their Dbl homology (DH) domain (1). GEFs stimulate the formation of the active, GTP-bound form of small GTPases such as Rho, Rac and Cdc42, signaling to various downstream molecules and regulating diverse cell functions. While the overexpressed, full-length Dbl gene has transforming activity (2), mutations resulting in truncated Dbl cause the protein to become highly oncogenic. This truncated form of Dbl, which lacks the amino-terminal 497 amino acids, has constitutive GEF activity (3) and is more stable than the full-length variant (4), allowing for increased signaling to downstream effector molecules. Dbl interacts with ezrin, a member of the ezrin/radixin/moesin (ERM) family of proteins that links the plasma membrane to the actin cytoskeleton. Dbl interacts with ezrin in lipid microdomains, which leads to Cdc42 activation and the regulation of processes such as filopodia formation and cell polarity (5,6). Dbl localization and biological activities are regulated in part by phosphatidylinositol 3-kinase (PI3K) (7). Dbl is also involved in cell survival and inhibits apoptosis through induction of Akt phosphorylation at Thr308 (8).

### Background References

- Zheng, Y. (2001) *Trends Biochem Sci* 26, 724-32.
- Ron, D. et al. (1988) *EMBO J* 7, 2465-73.
- Hart, M.J. et al. (1991) *Nature* 354, 311-4.
- Kamynina, E. et al. (2007) *Mol Cell Biol* 27, 1809-22.
- Batchelor, C.L. et al. (2007) *Cell Cycle* 6, 353-63.
- Prag, S. et al. (2007) *Mol Biol Cell* 18, 2935-48.
- Vanni, C. et al. (2006) *Cell Cycle* 5, 2657-65.
- Morley, S. et al. (2007) *Cell Signal* 19, 211-8.

### 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 nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

### Applications Key

**W:** Western Blotting

### Cross-Reactivity Key

**H:** Human **M:** Mouse **R:** Rat

### 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](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.