

#5848
Store at -20C

Brd2 (D89B4) Rabbit mAb



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, W-S, ChIP, ChIP-seq, C&R	H M	Endogenous	110	Rabbit IgG	#P25440	6046

Product Usage Information

For optimal ChIP and ChIP-seq results, use 10 µl of antibody and 10 µg of chromatin (approximately 4 x 10⁶ cells) per IP. This antibody has been validated using SimpleChIP® Enzymatic Chromatin IP Kits.

The CUT&RUN dilution was determined using CUT&RUN Assay Kit #86652.

Application	Dilution
Western Blotting	1:1000
Simple Western™	1:50 - 1:250
Chromatin IP	1:50
Chromatin IP-seq	1:50
CUT&RUN	1:50

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

Brd2 (D89B4) Rabbit mAb recognizes endogenous levels of total Brd2 protein. This antibody may cross-react with Brd3 protein.

Species predicted to react based on 100% sequence homology:

Rat, Monkey

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ala310 of human Brd2 protein.

Background**Brd2 (D89B4) Rabbit mAb (#5848) Datasheet Without Images Cell Signaling Technology**

Brd2 is a highly conserved member of the BET subfamily of bromodomain proteins that contain two tandem N-terminal bromodomains and a single C-terminal extra-terminal (ET) domain (1). In addition to its involvement in guiding the expression of cell cycle genes through its binding to multiple E2Fs (2), Brd2 has been shown to be associated with several regulators of transcription, including TFIID and Swi/Snf complexes (3,4). First identified as a nuclear serine/threonine kinase (2), Brd2, like other bromodomain proteins, is thought to function in mammalian development by regulating chromatin structure and transcription (5). Brd2 has been shown to bind to histone H4 via acetylated Lys12, a substrate of several histone acetyltransferase transcriptional coactivators (6). In mouse, Brd2 has the highest levels of expression during embryogenesis and in the adult testis, ovaries, and brain (3,7,8). Brd2-deficient mouse embryos exhibit delayed development and eventual death due to neural tube closure defects (5). Mutations in the promoter of the *Brd2* gene have been associated with increased susceptibility to juvenile myoclonic epilepsy (JME) (9).

Background References

1. Florence, B. and Faller, D.V. (2001) *Front Biosci* 6, D1008-18.
2. Denis, G.V. et al. (2000) *Cell Growth Differ* 11, 417-24.
3. Crowley, T.E. et al. (2002) *Mol Endocrinol* 16, 1727-37.
4. Denis, G.V. et al. (2006) *J Proteome Res* 5, 502-11.
5. Gyuris, A. et al. (2009) *Biochim Biophys Acta* 1789, 413-21.
6. Kanno, T. et al. (2004) *Mol Cell* 13, 33-43.
7. Shang, E. et al. (2004) *Gene Expr Patterns* 4, 513-9.
8. Trousdale, R.K. and Wolgemuth, D.J. (2004) *Mol Reprod Dev* 68, 261-8.
9. Pal, D.K. et al. (2003) *Am J Hum Genet* 73, 261-70.

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 **W-S:** Simple Western™ **ChIP:** Chromatin IP **ChIP-seq:** Chromatin IP-seq
C&R: CUT&RUN

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.
All other trademarks are the property of their respective owners. Visit 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.