Revision 1

Store at -20C

#15798

Brd2 (D89B4) Rabbit mAb (Biotinylated)

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M	Endogenous	110	Rabbit IgG	#P25440	6046

Product Usage Information

Application	Dilution
Western Blotting	1:1000

Storage

Supplied in 140 mM NaCl, 3 mM KCl, 10 mM sodium phosphate (pH 7.4) dibasic, 2 mM potassium phosphate monobasic, 2 mg/mL BSA, and 50% glycerol. Store at –20°C. *Do not aliquot the antibody.*

Specificity/Sensitivity

Brd2 (D89B4) Rabbit mAb (Biotinylated) recognizes endogenous levels of total Brd2 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.

Description

This Cell Signaling Technology antibody is conjugated to biotin under optimal conditions. The biotinylated antibody is expected to exhibit the same species cross-reactivity as the unconjugated Brd2 (D89B4) Rabbit mAb #5848.

Background

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

W: Western Blotting

Cross-Reactivity Key

H: Human **M:** Mouse

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