Revision 5

#96687 Store at -20C

SRC-2 (D2X4M) 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, ChIP, ChIP-seq	H Mk	Endogenous	180	Rabbit IgG	#Q15596	10499

Product Usage Information

For optimal ChIP and ChIP-seq, use 10 µl of antibody and 10 µg of chromatin (approximately 4 x 10^6 cells) per IP. This antibody has been validated using SimpleChIP® Enzymatic Chromatin IP Kits.

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:100
Chromatin IP	1:50
Chromatin IP-seq	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

SRC-2 (D2X4M) Rabbit mAb recognizes endogenous levels of total SRC-2 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gly1440 of human SRC-2 protein.

Background

There are three members of the steroid receptor co-activator (SRC) family of proteins: SRC-1 (NCoA-1), SRC-2 (TIF2/GRIP1/NCoA-2), and SRC-3 (ACTR/pCIP/RAC3/TRAM-1/AIB1). All SRC family members share significant structural homology and function to stimulate transcription mediated by nuclear hormone receptors and other transcriptional activators such as Stat3, NF-κB, E2F1, and p53 (1-4). Two SRC proteins, SRC-1 and SRC-3, function as histone acetyltransferases (5,6). In addition, all three family members can recruit other histone acetyltransferases (CBP/p300, PCAF) and histone methyltransferases (PRMT1, CARM1) to target promoters and cooperate to enhance expression of many genes (5-8). The SRC proteins play important roles in multiple physiological processes including cell proliferation, cell survival, somatic cell growth, mammary gland development, female reproductive function, and vasoprotection (9). SRC-1 and SRC-3 are conduits for kinase-mediated growth factor signaling to the estrogen receptor and other transcriptional activators. Seven SRC-1 phosphorylation sites and six SRC-3 phosphorylation sites have been identified, which are induced by steroids, cytokines, and growth factors and involve multiple kinase signaling pathways (9-11). Research has shown that all three SRC family members are associated with increased activity of nuclear receptors in breast, prostate, and ovarian carcinomas. According to the literature, SRC-3 is frequently amplified or overexpressed in a number of cancers (12), and SRC-1/PAX3 and SRC-2/MYST3 translocations are found associated with rhabdomyosarcoma and acute myeloid leukemia, respectively (13,14).

Background References

1. Giraud, S. et al. (2002) *J. Biol. Chem.* 277, 8004-8011.
2. Na, S.Y. et al. (1998) *J. Biol. Chem.* 273, 10831-10834.
3. Louie, M.C. et al. (2004) *Mol. Cell Biol.* 24, 5157-5171.
4. Lee, S.K. et al. (1999) *Mol. Endocrinol.* 13, 1924-1933.
5. Spencer, T.E. et al. (1997) *Nature* 389, 194-198.
6. Chen, H. et al. (1997) *Cell* 90, 569-580.
7. Koh, S.S. et al. (2001) *J. Biol. Chem.* 276, 1089-1098.
8. Chen, D. et al. (1999) *Science* 284, 2174-2177.
9. Wu, R.C. et al. (2004) *Mol. Cell* 15, 937-949.
10. Rowan, B.G. et al. (2000) *J. Biol. Chem.* 275, 4475-4483.
11. Zhou, H.J. et al. (2005) *Cancer Res.* 65, 7976-7983.
12. Torres-Arzayus, M.I. et al. (2004) *Cancer Cell* 6, 263-274.
13. Wachtel, M. et al. (2004) *Cancer Res.* 64, 5539-5545.
14. Deguchi, K. et al. (2003) *Cancer Cell* 3, 259-271.

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 **ChIP:** Chromatin IP **ChIP-seq:** Chromatin IP-seq

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

Limited Uses