

Technical Data Sheet

Purified Mouse Anti-Human SMRT

Product Information

Material Number:	611387
Size:	150 µg
Concentration:	250 µg/ml
Clone:	44/SMRT
Immunogen:	Human SMRT aa. 1366-1473
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Human
Target MW:	340 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

Steroid nuclear hormone receptors regulate physiological homeostasis through repression and activation of gene transcription. In the absence of hormone, DNA-bound steroid receptors recruit corepressor, such as silencing mediator of retinoic acid and thyroid hormone receptor (SMRT) and nuclear receptor corepressor (N-CoR), which bind to the free ligand binding domain of the thyroid hormone receptor, retinoic acid receptor, and other nuclear receptors. SMRT and N-CoR form a large protein complex with histone deacetylase I (HDAC1) and Sin3A, which deacetylates histones to alter chromatin structure in a manner that inhibits transcription. In addition, SMRT and N-CoR proteins interact with the transcription factor CBF/RBP-Jk to regulate Notch signaling pathways. SMRT contains four domains related to repressor activity (RD1, RD2, SRD1, and SRD2), two receptor interaction domains (RID1 and RID2), and a SANT region that is found in yeast chromatin remodeling factor SWI3. The ubiquitous expression pattern and corepressor activity of SMRT indicates that this protein is important for hormonal control of gene transcription in many tissues.



Western blot analysis of SMRT on Jurkat cell lysate.
Lane 1: 1:250, lane 2: 1:500, lane 3: 1:1000 dilution of anti-SMRT antibody.



Immunofluorescent staining of Wi38 cells with anti-SMRT antibody.

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography. Store undiluted at -20°C.

Application Notes

Application

Western blot	Routinely Tested
Immunofluorescence	Tested During Development

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Recommended Assay Procedure:

Western blot: Please refer to http://www.bdbiosciences.com/pharming/en/protocols/Western_Blotting.shtml.

Suggested Companion Products

Catalog Number	Name	Size	Clone
611451	Jurkat Cell Lysate	500 µg	(none)
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)
554001	FITC Goat Anti-Mouse Ig	0.5 mg	Polyclonal

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharming/en/protocols for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

Chen JD, Evans RM. A transcriptional co-repressor that interacts with nuclear hormone receptors. *Nature*. 1995; 377(6548):454-457.(Biology)
Nagy L, Kao HY, Chakravarti D, et al. Nuclear receptor repression mediated by a complex containing SMRT, mSin3A, and histone deacetylase. *Cell*. 1997; 89(3):373-380.(Biology)
Ordentlich P, Downes M, Xie W, Genin A, Spinner NB, Evans RM. Unique forms of human and mouse nuclear receptor corepressor SMRT. *Proc Natl Acad Sci U S A*. 1999; 96(6):2639-2644.(Biology)
Wagner BL, Norris JD, Knotts TA, Weigel NL, McDonnell DP. The nuclear corepressors NCoR and SMRT are key regulators of both ligand- and 8-bromo-cyclic AMP-dependent transcriptional activity of the human progesterone receptor. *Mol Cell Biol*. 1998; 18(3):1369-1378.(Biology)