

# SCML2 (S-17): sc-131781

## BACKGROUND

In *Drosophila*, the Polycomb (PcG) gene family encodes chromatin proteins that are required for the repression of homeotic loci in embryonic development. PcG proteins work in conjunction with the trithorax-group (trxG), which activate homeobox gene expression during embryonic development. SCM (sex comb on midleg) is an important *Drosophila* PcG protein involved in transcriptional repression. SCML2 (sex comb on midleg-like 2) is a human homolog of this *Drosophila* protein. SCML2 is a ubiquitously expressed protein with predominant expression in placenta, testis and thymus. Upon DNA damage, SCML2 may be phosphorylated by ATR or ATM. Due to alternative splicing, two isoforms exist for this protein.

## REFERENCES

1. Montini, E., et al. 1999. Identification of SCML2, a second human gene homologous to the *Drosophila* sex comb on midleg (Scm): a new gene cluster on Xp22. *Genomics* 58: 65-72.
2. Tomotsune, D., et al. 2000. A novel member of murine Polycomb-group proteins, Sex comb on midleg homolog protein, is highly conserved, and interacts with RAE28/mph1 *in vitro*. *Differentiation* 65: 229-239.
3. Toutain, A., et al. 2002. Refinement of the NHS locus on chromosome Xp22.13 and analysis of five candidate genes. *Eur. J. Hum. Genet.* 10: 516-520.
4. Sathyamurthy, A., et al. 2003. Crystal structure of the malignant brain tumor (MBT) repeats in Sex Comb on Midleg-like 2 (SCML2). *J. Biol. Chem.* 278: 46968-46973.
5. Peterson, A.J., et al. 2004. Requirement for sex comb on midleg protein interactions in *Drosophila* polycomb group repression. *Genetics* 167: 1225-1239.

## CHROMOSOMAL LOCATION

Genetic locus: SCML2 (human) mapping to Xp22.13.

## SOURCE

SCML2 (S-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SCML2 of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-131781 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

## APPLICATIONS

SCML2 (S-17) is recommended for detection of SCML2 isoforms 1 and 2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other SCML family members.

SCML2 (S-17) is also recommended for detection of SCML2 isoforms 1 and 2 in additional species, including canine.

Suitable for use as control antibody for SCML2 siRNA (h): sc-90912, SCML2 shRNA Plasmid (h): sc-90912-SH and SCML2 shRNA (h) Lentiviral Particles: sc-90912-V.

Molecular Weight of human SCML2: 77 kDa.

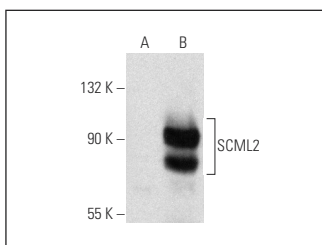
Molecular Weight of mouse SCML2: 93 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or SCML2 (h): 293T Lysate: sc-116915.

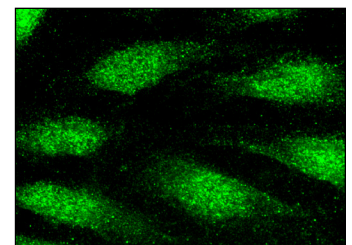
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



SCML2 (S-17): sc-131781. Western blot analysis of SCML2 expression in non-transfected: sc-117752 (A) and human SCML2 transfected: sc-116915 (B) 293T whole cell lysates.



SCML2 (S-17): sc-131781. Immunofluorescence staining of formalin-fixed HeLa cells showing nuclear localization.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.