

## PEBP2 $\beta$ (h2): 293T Lysate: sc-172310

### BACKGROUND

The transcription factor polyomavirus enhancer binding protein 2 (PEBP2), also designated Osf2 (osteoblast-specific transcription factor), CBFA1 (core binding factor) and AML3 (acute myeloid leukemia), is composed of two subunits,  $\alpha$  and  $\beta$ , which are essential for the regulation of hematopoiesis and osteogenesis. The PEBP2 $\alpha$  subunits, PEBP2 $\alpha$ A, PEBP2 $\alpha$ B and PEBP2 $\alpha$ C, are encoded by three RUNX genes, all of which contain a 128 amino acid region homologous to the highly conserved *Drosophila* segmentation gene, runt. This region is involved in DNA binding and heterodimerization with the regulatory  $\beta$  subunit, which facilitates DNA binding of the  $\alpha$  subunit. Both subunits are required for *in vivo* function; the disruption of either gene results in a lack of definitive hematopoiesis followed by embryo death *in utero* due to hemorrhage in the central nervous system. The gene encoding PEBP2 $\beta$  is the target of chromosomal inversion 16 (p13;q22) with the smooth muscle myosin heavy chain, producing a chimeric gene, PEBP2 $\beta$ /CBF $\beta$ -SMMHC, that is associated with human acute myeloid leukemia.

### REFERENCES

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8. Kanto, S., et al. 2000. The PEBP2 $\beta$ /CBF $\beta$ -SMMHC chimeric protein is localized both in the cell membrane and nuclear subfractions of leukemic cells carrying chromosomal inversion 16. *Leukemia* 14: 1253-129.

### CHROMOSOMAL LOCATION

Genetic locus: CBFB (human) mapping to 16q22.1.

### PRODUCT

PEBP2 $\beta$  (h2): 293T Lysate represents a lysate of human PEBP2 $\beta$  transfected 293T cells and is provided as 100  $\mu$ g protein in 200  $\mu$ l SDS-PAGE buffer.

### APPLICATIONS

PEBP2 $\beta$  (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive PEBP2 $\beta$  antibodies. Recommended use: 10-20  $\mu$ l per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

### STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

### RESEARCH USE

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

### PROTOCOLS

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