

# Parafibromin (m): 293T Lysate: sc-122375

## BACKGROUND

Parathyroid tumors are heterogeneous and diagnosis of the disease is often difficult. The Parafibromin protein may be important as a marker for diagnosing parathyroid carcinoma. Parafibromin is encoded by the endocrine tumor suppressor gene CDC73 (cell division cycle 73, Paf1/RNA polymerase II complex component), alternatively known as the HRPT2 (hyperparathyroidism-jaw tumor syndrome 2) gene. The human CDC73 gene, which maps to chromosome 1q31.2, is the human homolog of *Saccharomyces cerevisiae* Cdc73 and is responsible for the hyperparathyroidism with jaw tumor syndrome (HPT-JT). Parafibromin is part of the RNA polymerase II/Paf1 complex, which is crucial for histone modification. This Parafibromin complex binds to both the non-phosphorylated forms and the Ser 2 and Ser 5 phosphorylated forms of the RNA polymerase II large subunit.

## REFERENCES

1. Simonds, W.F., et al. 2004. Familial isolated hyperparathyroidism is rarely caused by germline mutation in HRPT2, the gene for the hyperparathyroidism-jaw tumor syndrome. *J. Clin. Endocrinol. Metab.* 89: 96-102.
2. Cavaco, B.M., et al. 2004. Hyperparathyroidism-jaw tumor syndrome in Roma families from Portugal is due to a founder mutation of the HRPT2 gene. *J. Clin. Endocrinol. Metab.* 89: 1747-1752.
3. Cetani, F., et al. 2004. Genetic analyses of the HRPT2 gene in primary hyperparathyroidism: germline and somatic mutations in familial and sporadic parathyroid tumors. *J. Clin. Endocrinol. Metab.* 89: 5583-5591.
4. Haven, C.J., et al. 2004. Gene expression of parathyroid tumors: molecular subclassification and identification of the potential malignant phenotype. *Cancer Res.* 64: 7405-7411.
5. Tan, M.H., et al. 2004. Loss of parafibromin immunoreactivity is a distinguishing feature of parathyroid carcinoma. *Clin. Cancer Res.* 10: 6629-6637.
6. Rozenblatt-Rosen, O., et al. 2005. The Parafibromin tumor suppressor protein is part of a human Paf1 complex. *Mol. Cell. Biol.* 25: 612-620.
7. Hahn, M.A. and Marsh, D.J. 2007. Nucleolar localization of Parafibromin is mediated by three nucleolar localization signals. *FEBS Lett.* 581: 5070-5074.

## CHROMOSOMAL LOCATION

Genetic locus: Cdc73 (mouse) mapping to 1 F.

## PRODUCT

Parafibromin (m): 293T Lysate represents a lysate of mouse Parafibromin transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

## 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.

## PROTOCOLS

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

## APPLICATIONS

Parafibromin (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive Parafibromin antibodies. Recommended use: 10-20 µl per lane.

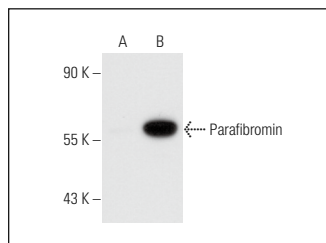
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Parafibromin (2H1): sc-33638 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse Parafibromin expression in Parafibromin transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

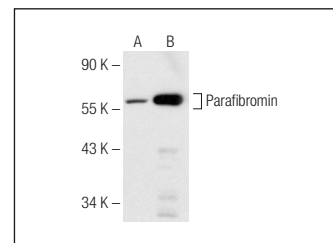
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:  
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

## DATA



Parafibromin (2H1): sc-33638. Western blot analysis of Parafibromin expression in non-transfected: sc-117752 (A) and mouse Parafibromin transfected: sc-122375 (B) 293T whole cell lysates.



Parafibromin (E-4): sc-373792. Western blot analysis of Parafibromin expression in non-transfected: sc-117752 (A) and mouse Parafibromin transfected: sc-122375 (B) whole cell lysates.

## RESEARCH USE

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