



Parafibromin (h): 293T Lysate: sc-117050

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 nonphosphorylated 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 (human) mapping to 1q31.2.

PRODUCT

Parafibromin (h): 293T Lysate represents a lysate of human 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 for detailed protocols and support products.

APPLICATIONS

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

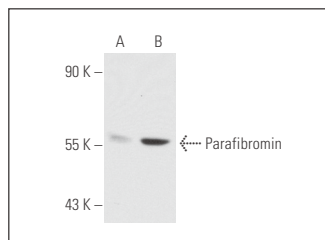
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

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

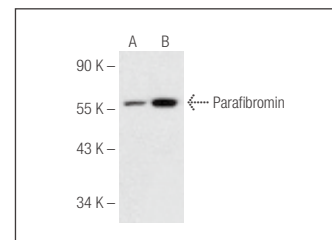
RECOMMENDED SUPPORT REAGENTS

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 human Parafibromin transfected: sc-117050 (B) 293T whole cell lysates.



Parafibromin (E-4): sc-373792. Western blot analysis of Parafibromin expression in non-transfected: sc-117752 (A) and human Parafibromin transfected: sc-117050 (B) whole cell lysates.

RESEARCH USE

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