

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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# CCDC6 (h2): 293T Lysate: sc-117205



The Power to Question

#### **BACKGROUND**

CCDC6 (coiled-coil domain containing 6), also known as H4, PTC, TPC or TST1, is a 585 amino acid cytoskeletal protein. Expressed throughout the body, CCDC6 exists in an  $\alpha$ -helical conformation and has a leucine zipper domain through which it can fuse to PDGFR- $\beta$  (platelet-derived growth factor receptor  $\beta$ ), a protein that functions as a mitogen for mesenchyme- and glia-derived cells. Additionally, CCDC6 is a fusion partner of Ret (Ret receptor tyrosine kinase), a proto-oncogene that is involved in GDNF signaling. These fusion products are not present in normal cells but are the result of a chromosomal rearrangement in the CCDC6 gene, which renders the CCDC6 protein susceptible to fusion events. When CCDC6 is fused to either PDGFR- $\beta$  or Ret, further chromosomal rearrangements may occur that can lead to various carcinomas including human papillary thyroid carcinoma, chronic myelomonocytic leukemia and mammary and cutaneous gland tumors.

#### **REFERENCES**

- 1. Grieco, M., et al. 1994. Cloning and characterization of H4 (D10S170), a gene involved in Ret rearrangements *in vivo*. Oncogene 9: 2531-2535.
- Tong, Q., et al. 1995. Characterization of the promoter region and oligomerization domain of H4 (D10S170), a gene frequently rearranged with the Ret proto-oncogene. Oncogene 10: 1781-1787.
- Portella, G., et al. 1996. Development of mammary and cutaneous gland tumors in transgenic mice carrying the Ret/PTC1 oncogene. Oncogene 13: 2021-2026.
- Tong, Q., et al. 1997. Leucine zipper-mediated dimerization is essential for the PTC1 oncogenic activity. J. Biol. Chem. 272: 9043-9047.
- 5. Schwaller, J., et al. 2001. H4(D10S170), a gene frequently rearranged in papillary thyroid carcinoma, is fused to the platelet-derived growth factor receptor  $\beta$  gene in atypical chronic myeloid leukemia with t(5;10)(q33;q22). Blood 97: 3910-3918.
- Puxeddu, E., et al. 2005. Characterization of novel non-clonal intrachromosomal rearrangements between the H4 and PTEN genes (H4/PTEN) in human thyroid cell lines and papillary thyroid cancer specimens. Mutat. Res. 570: 17-32.
- 7. Merolla, F., et al. 2007. Involvement of H4(D10S170) protein in ATM-dependent response to DNA damage. Oncogene 26: 6167-6175.
- Drechsler, M., et al. 2007. Fusion of H4/D10S170 to PDGFR-β in a patient with chronic myelomonocytic leukemia and long-term responsiveness to imatinib. Ann. Hematol. 86: 353-354.

#### **CHROMOSOMAL LOCATION**

Genetic locus: CCDC6 (human) mapping to 10q21.2.

#### **PRODUCT**

CCDC6 (h2): 293T Lysate represents a lysate of human CCDC6 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

#### **RESEARCH USE**

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

#### **APPLICATIONS**

CCDC6 (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive CCDC6 antibodies. Recommended use: 10-20 µl per lane.

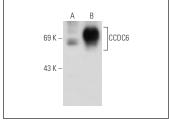
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

CCDC6 (Q-23): sc-100309 is recommended as a positive control antibody for Western Blot analysis of enhanced human CCDC6 expression in CCDC6 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

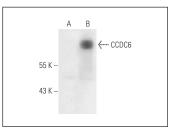
#### **RECOMMENDED SUPPORT REAGENTS**

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

#### **DATA**







CCDC6 (H-160): sc-292276. Western blot analysis of CCDC6 expression in non-transfected: sc-117752 (A) and human CCDC6 transfected: sc-117205 (B) 293T whole cell I vsates.

#### **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.

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