

CCDC6 (Q-23): sc-100309

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- β (platelet-derived growth factor receptor β), 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- β 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

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- 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.
- 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.

SOURCE

CCDC6 (Q-23) is a mouse monoclonal antibody raised against recombinant CCDC6 of human origin.

RESEARCH USE

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

PRODUCT

Each vial contains 100 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

CCDC6 (Q-23) is recommended for detection of CCDC6 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CCDC6 siRNA (h): sc-90423, CCDC6 shRNA Plasmid (h): sc-90423-SH and CCDC6 shRNA (h) Lentiviral Particles: sc-90423-V.

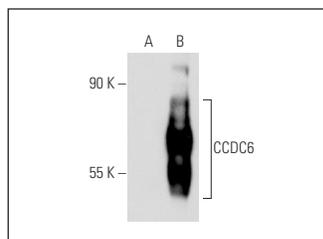
Molecular Weight of CCDC6: 66 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203 or CCDC6 (h): 293T lysate: sc-115365.

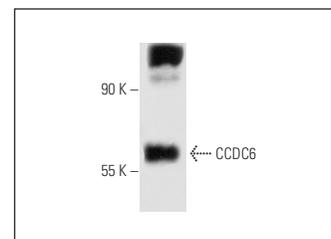
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



CCDC6 (Q-23): sc-100309. Western blot analysis of CCDC6 expression in non-transfected: sc-117752 (A) and human CCDC6 transfected: sc-115365 (B) 293T whole cell lysates.



CCDC6 (Q-23): sc-100309. Western blot analysis of CCDC6 expression in K-562 whole cell lysate.

SELECT PRODUCT CITATIONS

- Liu, J., et al. 2021. Genetic fusions favor tumorigenesis through deprotonation loss in oncogenes. *Nat. Commun.* 12: 6704.

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 for detailed protocols and support products.