

CTHRC1 (T-19): sc-70249

BACKGROUND

CTHRC1 (collagen triple helix repeat containing 1) is a 243 amino acid secreted protein that localizes to the extracellular matrix and contains one collagen-like domain. Expressed as two alternatively spliced isoforms, the first of which is expressed in calcified atherosclerotic plaque and chondrocyte-like cells, CTHRC1 is thought to function as a negative regulator of collagen matrix deposition and may also play a role in the stabilization of ligand-receptor interactions in the Wnt pathway. CTHRC1 is widely present in a variety of cancers, including melanoma and breast carcinoma, and may participate in cancer cell migration and cancer tissue invasion and metastasis. The gene encoding CTHRC1 maps to human chromosome 8, which consists of nearly 146 million base pairs, houses more than 800 genes and is associated with a variety of diseases and malignancies.

REFERENCES

1. Pygagay, P., et al. 2005. Collagen triple helix repeat containing 1, a novel secreted protein in injured and diseased arteries, inhibits collagen expression and promotes cell migration. *Circ. Res.* 96: 261-268.
2. Tang, L., et al. 2006. Aberrant expression of collagen triple helix repeat containing 1 in human solid cancers. *Clin. Cancer Res.* 12: 3716-3722.
3. LeClair, R.J., et al. 2007. CTHRC1 is a novel inhibitor of transforming growth factor- β signaling and neointimal lesion formation. *Circ. Res.* 100: 826-833.
4. LeClair, R. and Lindner, V. 2007. The role of collagen triple helix repeat containing 1 in injured arteries, collagen expression, and transforming growth factor β signaling. *Trends Cardiovasc. Med.* 17: 202-205.
5. Leclair, R.J., et al. 2008. Intracellular localization of CTHRC1 characterizes differentiated smooth muscle. *Arterioscler. Thromb. Vasc. Biol.* 28: 1332-1338.
6. Yamamoto, S., et al. 2008. CTHRC1 selectively activates the planar cell polarity pathway of Wnt signaling by stabilizing the Wnt-receptor complex. *Dev. Cell* 15: 23-36.

CHROMOSOMAL LOCATION

Genetic locus: CTHRC1 (human) mapping to 8q22.3; Cthrc1 (mouse) mapping to 15 B3.1.

SOURCE

CTHRC1 (T-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of CTHRC1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-70249 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

CTHRC1 (T-19) is recommended for detection of CTHRC1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

CTHRC1 (T-19) is also recommended for detection of CTHRC1 in additional species, including equine, bovine, porcine and avian.

Suitable for use as control antibody for CTHRC1 siRNA (h): sc-77043, CTHRC1 siRNA (m): sc-77044, CTHRC1 shRNA Plasmid (h): sc-77043-SH, CTHRC1 shRNA Plasmid (m): sc-77044-SH, CTHRC1 shRNA (h) Lentiviral Particles: sc-77043-V and CTHRC1 shRNA (m) Lentiviral Particles: sc-77044-V.

Molecular Weight of CTHRC1: 25 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **CTHRC1 (1G12): sc-293270**, our highly recommended monoclonal alternative to CTHRC1 (T-19).