

CTRP5 (S-15): sc-70253

BACKGROUND

Members of the C1q superfamily have diverse functions that are related to cell adhesion and basement membrane components. CTRP5 (complement C1q tumor necrosis factor-related protein 5) is a 243 amino acid secreted and membrane-associated protein that contains a collagen-like domain and a C1q domain. CTRP5 is a short-chain collagen that is expressed in retinal pigment epithelium as well as brain, lung, liver and placenta. By forming an extracellular hexagonal lattice, CTRP5 facilitates the adhesion of basal retinal pigment epithelium to Bruch's membrane, the innermost layer of the choroid. A mutation within the C1q domain of CTRP5 results in abnormal high molecular weight aggregate formation, which alters its structure and interactions. This mutation may result in the presentation of late-onset retinal degeneration (LORD), an autosomal dominant disorder that is characterized by punctate yellow-white deposits in the retinal fundus and night blindness.

REFERENCES

- Hayward, C., et al. 2003. Mutation in a short-chain collagen gene, CTRP5, results in extracellular deposit formation in late-onset retinal degeneration: a genetic model for age-related macular degeneration. *Hum. Mol. Genet.* 12: 2657-2667.
- Zhang, Z., et al. 2004. Signal peptide prediction based on analysis of experimentally verified cleavage sites. *Protein Sci.* 13: 2819-2824.
- Ayyagari, R., et al. 2005. Late-onset macular degeneration and long anterior lens zonules result from a CTRP5 gene mutation. *Invest. Ophthalmol. Vis. Sci.* 46: 3363-3371.
- Shu, X., et al. 2006. Disease mechanisms in late-onset retinal macular degeneration associated with mutation in C1QTNF5. *Hum. Mol. Genet.* 15: 1680-1689.
- Mandal, M.N., et al. 2006. CTRP5 is a membrane-associated and secretory protein in the RPE and ciliary body and the S163R mutation of CTRP5 impairs its secretion. *Invest. Ophthalmol. Vis. Sci.* 47: 5505-5513.
- Mandal, M.N., et al. 2006. Spatial and temporal expression of MFRP and its interaction with CTRP5. *Invest. Ophthalmol. Vis. Sci.* 47: 5514-5521.

CHROMOSOMAL LOCATION

Genetic locus: C1QTNF5 (human) mapping to 11q23.3; C1qtnf5 (mouse) mapping to 9 A5.1.

SOURCE

CTRP5 (S-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of CTRP5 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-70253 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CTRP5 (S-15) is recommended for detection of CTRP5 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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).

CTRP5 (S-15) is also recommended for detection of CTRP5 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for CTRP5 siRNA (h): sc-77053, CTRP5 siRNA (m): sc-77054, CTRP5 shRNA Plasmid (h): sc-77053-SH, CTRP5 shRNA Plasmid (m): sc-77054-SH, CTRP5 shRNA (h) Lentiviral Particles: sc-77053-V and CTRP5 shRNA (m) Lentiviral Particles: sc-77054-V.

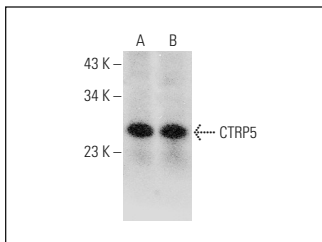
Molecular Weight of CTRP5: 25 kDa.

Positive Controls: mouse uterus extract: sc-364254 or mouse brain extract: sc-2253.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



CTRP5 (S-15): sc-70253. Western blot analysis of CTRP5 expression in mouse uterus (A) and mouse brain (B) tissue extracts.

STORAGE

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

RESEARCH USE

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