



Recombinant Protein Technical Manual

Recombinant Rat CTHRC1 Protein (His Tag)

RPES3236

Product Data:

Product SKU: RPES3236

Size: 20µg

Species: Rat

Expression host: HEK293 Cells

Uniprot: NP_001258229.1

Protein Information:

Molecular Mass: 22.8 kDa

AP Molecular Mass:

Tag: C-His

Bio-activity:

Purity: > 90 % as determined by SDS-PAGE

Endotoxin: < 1.0 EU per µg protein as determined by the LAL method.

Storage: Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

Shipping: This product is provided as lyophilized powder which is shipped with ice packs.

Formulation: Lyophilized from sterile PBS, pH 7.4

Reconstitution: Please refer to the printed manual for detailed information.

Application:

Synonyms: CTHRC1

Immunogen Information:

Sequence: Met1-Lys230

Background:

Collagen triple helix repeat-containing protein 1, also known as Protein NMTC1, and CTHRC1, is a secreted protein that is glycosylated and highly conserved from lower chordates to mammals. CTHRC1 expression was not detectable in normal arteries. However, it is transiently expressed in the arterial wall in response to injury where it may contribute to vascular remodeling by limiting collagen matrix deposition and promoting cell migration. A short collagen motif with 12 Gly-X-Y repeats appears to be responsible for trimerization of the CTHRC1 protein and this renders the molecule susceptible to cleavage by collagenase. CTHRC1 overexpression caused a dramatic reduction in collagen type I mRNA and protein levels. Currently available data indicate that *Cthrc1* expression in vascular cells regulates transforming growth factor beta responsiveness, thereby impacting transforming growth factor beta target genes, including collagens. Additionally, CTHRC1 increases bone mass as a positive regulator of osteoblastic bone formation and offers an anabolic approach for the treatment of osteoporosis.