# Recombinant Protein Technical Manual

## Recombinant Human Cochlin/COCH Protein (His Tag)

**RPES1794**

## Product Data:

**Product SKU:** RPES1794

**Size:** 50µg

**Species**: Human

**Expression host:** HEK293 Cells

**Uniprot:** NP_001128530.1

## Protein Information:

**Molecular Mass:** 59.4 kDa

**AP Molecular Mass:** 66, 48 & 18 kDa

**Tag:** N-His

**Bio-activity:**

**Purity:** > 92 % as determined by reducing SDS-PAGE.

**Endotoxin:** < 1.0 EU per µg 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℃ for 2-7 days. Aliquots of reconstituted samples are stable at < -20℃ 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:** COCH-5B2;COCH5B2;DFNA9

## Immunogen Information:

**Sequence:** Glu 25-Gln 550

## Background:

Cochlin, also known as COCH-5B2 and COCH, is a secreted protein which contains one LCCL domain and two VWFA domains. It is an abundant inner ear protein expressed as multiple isoforms. Its function is also unknown, but it is suspected to be an extracellular matrix component. Cochlin and type II collagen are major constituents of the inner ear extracellular matrix, and Cochlin constitutes 70% of non-collagenous protein in the inner ear, the cochlin isoforms can be classified into three subgroups, p63s, p44s and p40s. The expression of cochlin is highly specific to the inner ear. Eleven missense mutation and one in-frame deletion have been reported in the COCH gene, causing hereditary progressive sensorineural hearing loss and vestibular dysfunction, deafness autosomal dominant type 9 (DFNA9). The co-localization of cochlin and type II collagen in the fibrillar substance in the subepithelial area indicate that cochlin may play a role in the structural homeostasis of the vestibule acting in concert with the fibrillar type II collagen bundles. Defects in COCH may contribute to Meniere disease which is an autosomal dominant disorder characterized by hearing loss associated with episodic vertigo.