



Recombinant Protein Technical Manual
Recombinant Human CIB2/KIP-2 Protein (His Tag)
RPES2301

Product Data:

Product SKU: RPES2301

Size: 20µg

Species: Human

Expression host: E. coli

Uniprot: O75838

Protein Information:

Molecular Mass: 23.1 kDa

AP Molecular Mass: 27 kDa

Tag: N-His

Bio-activity:

Purity: > 75 % as determined by reducing SDS-PAGE.

Endotoxin: Please contact us for more information.

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 50mM Tris, 20% glycerol, pH 8.0

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

Application:

Synonyms: DFNB48;KIP2;USH1J

Immunogen Information:

Sequence: Met 1-Ile 187

Background:

Calcium and integrin-binding protein 2 (CIB2) belongs to a protein family with four known members, CIB1 through CIB4, which are characterized by multiple calcium-binding EF-hand domains. Sensorineural hearing loss is genetically heterogeneous. The mutations in CIB2, which encodes a calcium- and integrin-binding protein, are associated with nonsyndromic deafness (DFNB48) and Usher syndrome type 1J (USH1J). Furthermore, in zebrafish and *Drosophila melanogaster*, CIB2 is essential for the function and proper development of hair cells and retinal photoreceptor cells. We also show that CIB2 is a new member of the vertebrate Usher interactome. Variants in CIB2 can underlie either Usher syndrome type I (USH1J) or nonsyndromic hearing impairment (NSHI) (DFNB48). CIB2 is widely expressed in various human and animal tissues, mainly in skeletal muscle, nervous tissue, inner ear, and retina. The CIB2 protein is responsible for maintaining Ca(2+) homeostasis in cells and interacting with integrins-transmembrane receptors essential for cell adhesion, migration, and activation of signaling pathways. Calcium signaling pathway is crucial for signal transduction in the inner ear, and integrins regulate hair cell differentiation and maturation of the stereocilia.