



# Recombinant Protein Technical Manual

## Recombinant Human Coronin-6/CORO6 Protein (His Tag)

RPES1074

### Product Data:

**Product SKU:** RPES1074

**Size:** 10µg

**Species:** Human

**Expression host:** E. coli

**Uniprot:** Q6QEF8-4

### Protein Information:

**Molecular Mass:** 28.3 kDa

**AP Molecular Mass:** 30-35 kDa

**Tag:** N-6His

**Bio-activity:**

**Purity:** > 95 % 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°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 a 0.2 µm filtered solution of 20mM PB, 150mM NaCl, pH 7.4.

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

**Application:**

**Synonyms:** Coronin-6; Clipin-E; CORO6

## Immunogen Information:

**Sequence:** Met 1-Asp237

## Background:

Coronin 6, a newly identified member of the coronin family, is highly enriched at adult NMJs and regulates AChR clustering via modulating the interaction between receptors and the actin cytoskeletal network. Coronins are a family of conserved actin-binding proteins originally identified in the actin-rich structure of the amoeba *Dictyostelium discoideum*. To date, seven members of coronins have been identified in mammals, and most exhibit tissue-specific distribution patterns. Coronin 6 is prominently expressed in adult muscle and enriched at the NMJ. Studies with cultured myotubes reveal that Coronin 6 regulates both agrin- and laminin-induced AChR clustering and is important for anchoring AChRs onto the actin cytoskeleton. Also, both the C-terminal region and a conserved Arg29 residue at the N terminus of Coronin 6 are essential for its actin-binding activity and stabilization of AChR–cytoskeleton linkage. Importantly, *in vivo* knockdown of Coronin 6 in mouse skeletal muscle fibers leads to destabilization of AChR clusters, which demonstrates that Coronin 6 is a critical regulator of AChR clustering at the postsynaptic region of the NMJs through modulating the receptor-anchored actin cytoskeleton. The human Coronin 6 has five isoforms produced by alternative splicing, and tissue-specific expression of these isoforms are unclear.