



# Recombinant Protein Technical Manual

## Recombinant Human HAPLN1 Protein (His Tag)

RPES4416

### Product Data:

**Product SKU:** RPES4416

**Size:** 20µg

**Species:** Human

**Expression host:** HEK293 Cells

**Uniprot:** NP\_001875.1

### Protein Information:

**Molecular Mass:** 40 kDa

**AP Molecular Mass:** 52 kDa

**Tag:** C-His

**Bio-activity:**

**Purity:** > 90 % 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 sterile PBS, pH 7.4

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

**Application:**

**Synonyms:** CRTL1

## Immunogen Information:

**Sequence:** Met 1-Asn 354

## Background:

Hyaluronan (HA) is a high MW glycosaminoglycan significantly involved in the formation and stability of extracellular matrix via its association with specific HA-binding proteins. HAPLN1, also known as CRTL1 (Cartilage Link Protein 1, cLP ) and link protein, is a member of HA-binding protein (hyaladherins) family, and contains a common structural domain of about 100 amino acids that is termed a Link module with two  $\alpha$ -helices and two antiparallel  $\beta$ -sheets. HAPLN1/CRTL1 stabilizes the interaction between hyaluronan (HA) and versican, two extracellular matrix components essential for cardiac development. Link module superfamily can be divided into three subgroups, and the HAPLN family are C domain-type proteins that have an extended structure with one N-terminal V-type Ig-like domain followed by two link modules. In cartilage, aggrecan forms - cLP stabilized aggregates with HA that provides the tissue with its load bearing properties. HAPLN1 is a component of follicular matrix, was shown to enhance cumulus-oocyte complex (COC) expansion in vitro. HAPLN1 may promote periovulatory granulosa cell survival, which would facilitate their differentiation into luteal cells.