



# Recombinant Protein Technical Manual

## Recombinant Human Langerin/CD207 Protein (His Tag)

RPES3292

### Product Data:

**Product SKU:** RPES3292

**Size:** 10µg

**Species:** Human

**Expression host:** Human Cells

**Uniprot:** Q9UJ71

### Protein Information:

**Molecular Mass:** 31.5 kDa

**AP Molecular Mass:** 30-40 kDa

**Tag:** N-His

**Bio-activity:**

**Purity:** > 95% as determined by reducing SDS-PAGE.

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

**Storage:** Lyophilized protein should be stored at < -20°C, though stable at room temperature for 3 weeks. Reconstituted protein solution can be stored at 4-7°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 PBS, pH 7.4.

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

**Application:**

**Synonyms:** CD207 antigen; langerin; CD207; C-type lectin domain family 4 member K; C-type lectin domainfamily 4, member K

## Immunogen Information:

**Sequence:** Tyr64-Pro328(Val278Ala)

## Background:

Langerin (CD207) is a type II transmembrane glycoprotein which is member K of the C-type lectin domain family. Langerin is used as a marker for Langerhans cells (LCs) which represent the immature dendritic cells in the epidermis. Langerin is necessary and sufficient for Birbeck granule formation. Human langerin sequence contains a 43 aa cytoplasmic domain, a 21 aa transmembrane domain and a 264 aa extracellular domain (ECD) that contains a coiled-coil domain and a single C-type lectin domain. Human langerin shares 68%, 62%, 71% aa identity with mouse, rat and bovine langerin ECD, respectively. Trimerization greatly increases the lectin binding affinity. Langerin internalizes endogenous proteins such as type I procollagen. Internalization by LC is thought to lead to suppression of self reactions. Langerin also mediates endocytosis of non-peptide antigens containing mannose, N-acetyl glucosamine and fucose that are expressed by mycobacteria and fungae.