



# Recombinant Protein Technical Manual

## Recombinant Human CD180/RP105/LY64 Protein (His Tag)(Active) RPES1463

### Product Data:

**Product SKU:** RPES1463

**Size:** 10µg

**Species:** Human

**Expression host:** HEK293 Cells

**Uniprot:** NP\_005573.2

### Protein Information:

**Molecular Mass:** 69 kDa

**AP Molecular Mass:** 9000 kDa

**Tag:** C-His

**Bio-activity:** Measured by its binding ability in a functional ELISA. Immobilized human CD180 at 2 µg/ml (100 µl/well) can bind biotinylated mouse MD with a linear ranger of 3.125-25 µg/ml.

**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°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:** Functional ELISA

**Synonyms:** LY64;Ly78;RP105

## Immunogen Information:

**Sequence:** Met 1-Gly 626

## Background:

The cluster of differentiation (CD) system is commonly used as cell markers in immunophenotyping. Different kinds of cells in the immune system can be identified through the surface CD molecules which associate with the immune function of the cell. There are more than 320 CD unique clusters and subclusters have been identified. Some of the CD molecules serve as receptors or ligands important to the cell through initiating a signal cascade which then alter the behavior of the cell. Some CD proteins do not take part in cell signal process but have other functions such as cell adhesion. CD180, also known as RP105, is a B-cell surface molecule belonging to the family of pathogen receptors, Toll-like receptors (TLR). CD180 has an extracellular leucine-rich repeats and a short cytoplasmic tail. CD180 / RP105 interact with an extracellular molecule named MD1 and then together form the cell surface receptor complex RP105 / MD1 which induces B-cell activation in humans and mice, leading to proliferation and up-regulation of a costimulatory molecule, B7.2 / CD86. CD180 / RP105 also has a role in LPS response because B cells lacking RP105 show hyporesponsiveness to LPS.