



# Recombinant Protein Technical Manual

## Recombinant Human LILRB4/CD85k/ILT3 Protein (aa 22-259, Fc Tag)

RPES1230

### Product Data:

**Product SKU:** RPES1230

**Size:** 10µg

**Species:** Human

**Expression host:** Human Cells

**Uniprot:** Q8NHJ6

### Protein Information:

**Molecular Mass:** 53.2 kDa

**AP Molecular Mass:** 65-85 kDa

**Tag:** C-Fc

**Bio-activity:**

**Purity:** > 90% 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:** Leukocyte immunoglobulin-like receptor subfamily B member 4; Mast cell surface Lyophilized from a 0.2 µm filtered solution of PBS; pH 7.4. glycoprotein Gp49B; CD85k; Lilrb4; Gp49b

## Immunogen Information:

**Sequence:** Gln22-Glu259

## Background:

Mouse Leukocyte Immunoglobulin-like Receptor Subfamily B Member 4 (LILRB4/CD85k/ILT3) is an approximately transmembrane glycoprotein that negatively regulates immune cell activation. Mouse LILRB4 consists of a 215 amino acid (aa) extracellular domain with two Ig-like domains, a 22 aa transmembrane segment, and a 75 aa cytoplasmic domain with 3 immunoreceptor tyrosine-based inhibitory motifs (ITIM). Within the ECD, mouse LILRB4 shares 45% and 77% aa sequence identity with human and rat LILRB4, respectively. Alternative splicing of mouse LILRB4 generates a potentially soluble isoform that lacks the transmembrane segment. LILRB4 is expressed on dendritic cells (DC), monocytes, macrophages, and vascular endothelial cells (EC). Ligation of LILRB4 triggers ITIM-mediated inhibition of cellactivating signaling, leading to enhanced immune tolerance and reduced allogeneic graft rejection. Soluble LILRB4 induces the differentiation of CD8+ T suppressor cells (Ts) that can inhibit the effector functions of CD4+ Th cells and CD8+ CTL. In turn, CD8+ Ts cells induce LILRB4 up-regulation and a tolerogenic phenotype in monocytes, DC, and EC.