



# Recombinant Protein Technical Manual

## Recombinant Human CD28/TP44 Protein (Fc Tag)

RPE5104

### Product Data:

**Product SKU:** RPE5104

**Size:** 10µg

**Species:** Human

**Expression host:** Human Cells

**Uniprot:** P10747

### Protein Information:

**Molecular Mass:** 41.11 kDa

**AP Molecular Mass:** 60 kDa

**Tag:** C-Fc

**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 PBS, pH7.4.

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

**Application:**

**Synonyms:** CD28; CD28 antigen; CD28 molecule; T-cell-specific surface glycoprotein CD28; Tp44; TP44

## Immunogen Information:

**Sequence:** Asn19-Pro152

## Background:

T-cell-specific surface glycoprotein CD28(CD28) is a single-pass type1 membrane protein which contains one Ig-likeV-type (immunoglobulin-like) domain. It belongs to the immunoglobulin(Ig) superfamily. CD28 is one of the molecules expressed on T cells that provide co-stimulatory signals, which are required for T cell activation. CD28 co-stimulation is necessary for CD4 positive T-cell proliferation and survival, interleukin-2 production, and T-helper type-2 development. Human post-thymic regulatory T cells require CD28 co-stimulation to expand and maintain potent suppressive function in vivo. Apoptosis plays a key role in the age-related decline of CD28 expression and in immunosenescence. CD28 is the receptor for CD80 (B7.1) and CD86 (B7.2). When activated by Toll-like receptor ligands, the CD80 expression is upregulated in antigen presenting cells (APCs). The CD86 expression on antigen presenting cells is constitutive. CD28 is the only B7 receptor constitutively expressed on naive T cells.