



# Recombinant Protein Technical Manual

**Recombinant Human CD50/ICAM-3 Protein (His Tag)(Active)**  
RPES4223

## Product Data:

**Product SKU:** RPES4223

**Size:** 20µg

**Species:** Human

**Expression host:** HEK293 Cells

**Uniprot:** NP\_002153.2

## Protein Information:

**Molecular Mass:** 50.8 kDa

**AP Molecular Mass:** 10020 kDa

**Tag:** C-His

**Bio-activity:** Measured by the ability of the immobilized protein to support the adhesion of PMA-stimulated HSB2 human peripheral blood acute lymphoblastic leukemia cells. When cells are added to ICAM3-coated plates (12.5 µg/mL , 100 µL/well), approximately >25% cells will adhere specifically.

**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 7.5

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

**Application:**

**Synonyms:** CD50;CDW50;ICAM-3;ICAM-R

## Immunogen Information:

**Sequence:** Met 1-His 485

## Background:

The protein ICAM-3, also known as CD50, is a member of the intercellular adhesion molecule (ICAM) family consisting three members. It is a DC-SIGN ligand that is constitutively expressed on resting leukocytes, and is thus an important molecule for the first immune response. ICAM-3 comprises of five immunoglobulin-like domains, and binds LFA through its two N-terminal domains. It functions not only as an adhesion molecule, but also as a potent signalling molecule. ICAM-3 binds to LFA on antigen-presenting cells (APC) stabilizing the T cell-APC interaction, facilitating signaling through the CD3/TCR complex. However, recent evidence using cultured and transformed T cells suggests ICAM-3 may also function in signaling. It has been reported that CD50 molecule can play a role in developing functionally mature T lymphocytes and its expression increases during the maturation process of T lymphocytes. In addition, the interactions of ICAM-3 and LFA facilitate HIV- induced virological synapse formation between T cells. ICAM-3 is associated with an increase of cellular radio-resistance and cancer cell proliferation. It could be considered as a candidate for anti-cancer drug development and as a cancer diagnostic marker.