

Human CD50 / ICAM-3 Protein (His Tag)

Catalog Number: 10333-H08H



Sino Biological Inc.

Biological Solution Specialist

General Information

Gene Name Synonym:

CD50; CDW50; ICAM-R

Protein Construction:

A DNA sequence encoding the extracellular domain of human ICAM3 (NP_002153.2) (Met 1-His 485) was expressed, with the C-terminal fused polyhistidine tag.

Source: Human

Expression Host: Human Cells

QC Testing

Purity: > 92 % as determined by SDS-PAGE

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.

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Gln 30

Molecular Mass:

The recombinant human ICAM3 consists of 467 amino acids after removal of the signal peptide and predicts a molecular mass of 50.8 kDa. By SDS-PAGE, the apparent molecular mass of rh ICAM3 is approximately 100-120 kDa due to the glycosylation.

Formulation:

Lyophilized from sterile PBS, pH 7.5

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

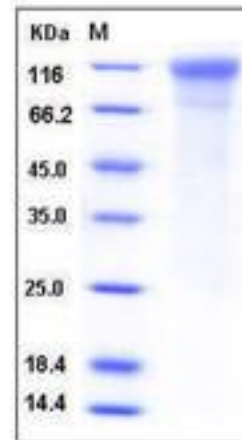
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

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-1 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-1 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-1 facilitate HIV-1- 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.

References

1. Berney SM, *et al.* (1999) ICAM-3 (CD50) cross-linking augments signaling in CD3-activated peripheral human T lymphocytes. *J Leukoc Biol.* 65(6): 867-74.
2. van Buul JD, *et al.* (2004) ICAM-3 activation modulates cell-cell contacts of human bone marrow endothelial cells. *J Vasc Res.* 41(1): 28-37.
3. Sugino H. (2005) ICAM-3, a ligand for DC-SIGN, was duplicated from ICAM-1 in mammalian evolution, but was lost in the rodent genome. *FEBS Lett.* 579(13): 2901-6.

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