Data Sheet (Cat.No.TMPY-01418)

TargetMol

ICAM-2/CD102 Protein, Human, Recombinant (His)

General Information

Synonyms:	CD102;intercellular adhesion molecule 2
Protein Construction:	A DNA sequence encoding the extracellular domain (Met 1-Gln 223) of human ICAM2 (NP_000864.2) was fused with a polyhistidine tag at the C-terminus. Predicted N terminal: Ser 22
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P13598
Molecular Weight:	24 kDa (predicted); 50-55 kDa (reducing condition, due to glycosylation)

QC Testing

Biological 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 ICAM2-coated plates (12.5 μg/ml, 100 μl/well), approximately 35 %-45% will adhere specifically .
Purity:	> 97 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.5. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Intercellular adhesion molecule 2 (ICAM-2, CD102), belongs to the ICAM family consisting of three members identified as ligands for integrin receptors. It is a type I transmembrane glycoprotein with two Ig-like C2-type domains and binds to the leukocyte integrins LFA-1 (CD11a/CD18) and Mac-1 (CD11b/CD18). As the second ligand of leukocyte function-associated antigen-1, ICAM-2 functions as a costimulatory molecule for effector cells. ICAM-2 is mainly expressed on vascular endothelial and hematopoietic cells. Interactions of ICAM-2 and the integrin receptors mediate cell adhesion in a wide range of lymphocyte, monocyte, natural killer cell, and granulocyte with other cells, and play important roles in many adhesion-dependent immune and inflammation responses, such as T cell aggregation, NK-cell cytotoxicity, and migration, lymphocyte recirculation, etc. Serum levels of ICAM-2 correlated significantly with the inflammatory and course sequences of trichinosis in mice and had a similar relationship with blood eosinophilia. So, estimation of ICAM-2 serum levels may prove useful in the diagnosis of trichinosis recent infections, and in monitoring the prognosis and response to treatment.

Reference

Weber KS,et al.(2004) Sialylation of ICAM-2 on platelets impairs adhesion of leukocytes via LFA-1 and DC-SIGN. Inflammation. 28(4): 177-88.

Tanaka H,et al.(2004) ICAM-2 gene therapy for peritoneal dissemination of scirrhous gastric carcinoma. Clin Cancer Res. 10(14): 4885-92.

Younis AI,et al.(2005) Intercellular adhesion molecule-2 (ICAM-2) in experimental trichinosis. J Egypt Soc Parasitol. 35(3): 1019-26.