Data Sheet (Cat.No.TMPY-00738)

TargetMol

CXADR/CAR Protein, Mouse, Recombinant (His & hFc)

General Information

Synonyms:	AW553441;coxsackie virus and adenovirus receptor;MCAR;2610206D03Rik;MCVADR; AU016810;CAR
Protein Construction:	A DNA sequence encoding the mouse CXADR (NP_001020363.1) extracellular domain (Met 1-Gly 237) was fused with the C-terminal polyhistidine-tagged Fc region of human IgG1 at the C-terminus. Predicted N terminal: Leu 20
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	P97792-1
Molecular Weight:	52 kDa (predicted); 60-65 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Measured by the ability of the immobilized protein to support the adhesion of mouse neutrophils. When 5 x 10E4 cells/well are added to CXADR-coated plates (4 μg/ml and 100 μl/well), approximately 20%-40% will adhere specifically after 60 minutes at 37℃.
Purity:	> 92 % 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 7.4. 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℃ to -80℃ 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℃. For reconstituted protein solutions, the solution can be stored at -20℃ to -80℃ 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

CXADR (coxsackie virus and adenovirus receptor), also known as CAR, is a type I transmembrane glycoprotein belonging to the CTX family of the Ig superfamily, and is essential for normal cardiac development in the mouse.

Proposed as a homophilic cell adhesion molecule, CXADR is a component of the epithelial apical junction complex that is essential for the tight junction integrity, and probably involved in transepithelial migration of polymorphonuclear leukocytes (PMN). Mature mouse CXADR structrually comprises a 218 aa extracellular domain (ECD) with a V-type (D1) and a C2-type (D2) Ig-like domain, a 21 aa transmembrane segment and a 17 aa intracellular domain, among which,D1 is thought to be responsible for homodimer formation in trans within tight junctions. The ECD of mouse CXADR shares 97%, 9% sequence identity with the corresponding regions of rat, human CXADR.

Reference

Tomko, R.P. et al., 1997, Proc. Natl. Acad. Sci. U.S.A. 94 (7): 3352-3356.
van Raaij , M.J. et al., 2001, Structure. 8 (11): 1147-1155.
Cohen, C.J. et al., 2001, J. Biol. Chem. 276 (27): 25392-25398.
Carson, S.D. et al., 2002, Rev. Med. Virol. 11 (4): 219-226.
Selinka, H.C. et al., 2004, Med. Microbiol. Immunol. 193 (2-3): 127-131.
Philipson, L. et al., 2004, Curr. Top. Microbiol. Immunol. 273:87-111.
Raschperger, E. et al., 2006, Exp. Cell Res. 312: 1566-1580.