

DESCRIPTION

Source	Chinese Hamster Ovary cell line, CHO-derived			
	MDP	Mouse IgG _{2A} (Glu98-Lys330)	IEGR	Mouse CLEC4E (Thr46-Asp214) Accession # Q9R0Q8
	N-terminus		C-terminus	

N-terminal Sequence Met

Analysis

Structure / Form Disulfide-linked homodimer

Predicted Molecular Mass 47 kDa

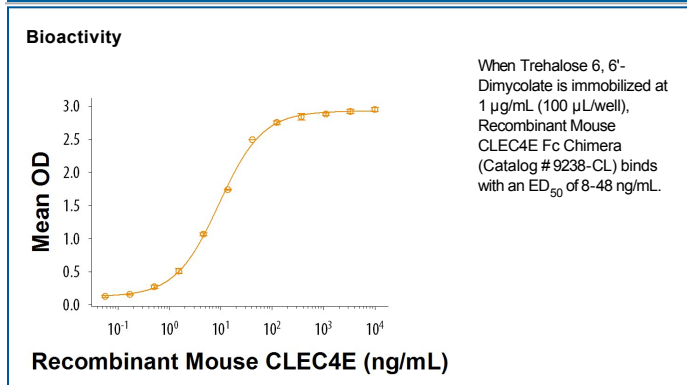
SPECIFICATIONS

SDS-PAGE	54-63 kDa, reducing conditions
Activity	Measured by its binding ability in a functional ELISA. When Trehalose 6, 6'-Dimycolate is immobilized at 1 µg/mL (100 µL/well), the concentration of Recombinant Mouse CLEC4E Fc Chimera that produces 50% of the optimal binding response is approximately 8-48 ng/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>90%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 500 µg/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 3 months, -20 to -70 °C under sterile conditions after reconstitution.

DATA



BACKGROUND

CLEC4E, also known as Mincle, is an approximately 30 kDa type 2 transmembrane C-type lectin that functions as an activating innate immune receptor (1). Mouse CLEC4E consists of a 19 amino acid (aa) cytoplasmic domain, a 21 aa transmembrane segment, and a 174 aa extracellular domain (ECD) that contains the C-type lectin domain (2). Within the ECD, mouse CLEC4E shares 65% and 87% aa sequence identity with human and rat CLEC4E, respectively. CLEC4E is expressed on monocytes, macrophages, and immature dendritic cells (2-5). It associates with CLEC4D/MCL and the gamma chain signaling subunits of Fc receptors (mediated by an Arg residue in the CLEC4E transmembrane segment) (3, 5, 6). Human CLEC4E binds to mycobacterial glycolipids including the immune adjuvant TDM (cord factor), its synthetic analog TDB, and GroMM (3, 4, 7-10). It also binds the nuclear protein SAP130 which can be released from necrotic cells (5) and cholesterol crystals deposited in atherosclerotic plaques (11). Mouse CLEC4E, in contrast, does not appear to interact with TDB, GroMM, or cholesterol crystals (7, 8, 11). CLEC4E ligation triggers phagocytosis and the production of inflammatory chemokines and cytokines (3-6, 8, 10). The fungus *Fonsecaea monophora* may evade immune clearance through binding to CLEC4E and suppressing IL-12 production and Th1 cell differentiation instead of promoting inflammation (9).

References:

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