

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human CLEC4E in direct ELISAs.
Source	Recombinant Monoclonal Rabbit IgG Clone # 2455C
Purification	Protein A or G purified from cell culture supernatant
Immunogen	Chinese Hamster Ovary cell line, CHO-derived recombinant human CLEC4E Arg41-Leu219 Accession # Q9ULY5
Conjugate	Alexa Fluor 750 Excitation Wavelength: 749 nm Emission Wavelength: 775 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide.

*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

	Recommended Concentration	Sample
Flow Cytometry	0.25-1 µg/10 ⁶ cells	HEK293 Human Cell Line Transfected with Human CLEC4e and eGFP

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. <ul style="list-style-type: none"> 12 months from date of receipt, 2 to 8 °C as supplied.

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). Human CLEC4E consists of a 19 amino acid (aa) cytoplasmic domain, a 21 aa transmembrane segment, and a 179 aa extracellular domain (ECD) that contains the C-type lectin domain (2). Within the ECD, human CLEC4E shares 65% and 68% aa sequence identity with mouse 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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