

DESCRIPTION

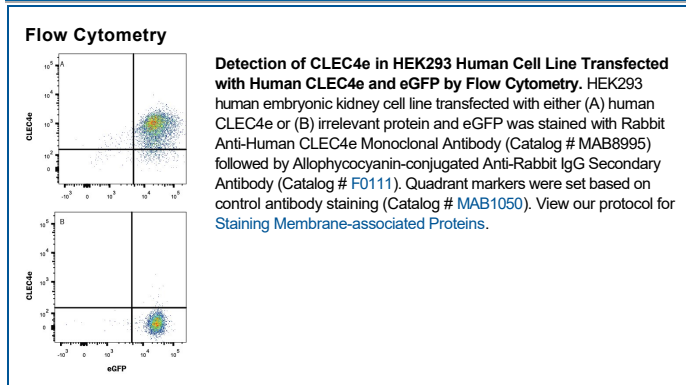
Species Reactivity	Human
Specificity	Detects human CLEC4E in direct ELISAs.
Source	Recombinant Monoclonal Rabbit IgG Clone # 2455C
Purification	Protein A or G purified from cell culture supernatant
Immunogen	Chinese Hamster Ovary cell line, CHO-derived recombinant human CLEC4E Arg41-Leu219 Accession # Q9ULY5
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

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 µg/10 ⁶ cells	See Below
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

DATA



PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <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. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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 monopora* 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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