

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Allergin-1 in direct ELISAs.
Source	Monoclonal Mouse IgG ₁ Clone # 767727
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Allergin-1 Met1-Lys227 Accession # Q7Z6M3
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 as a 0.2 µm filtered solution in PBS.

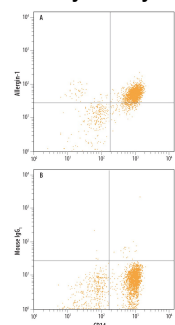
APPLICATIONS

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	2.5 µg/10 ⁶ cells	See Below
Immunocytochemistry	8-25 µg/mL	See Below
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

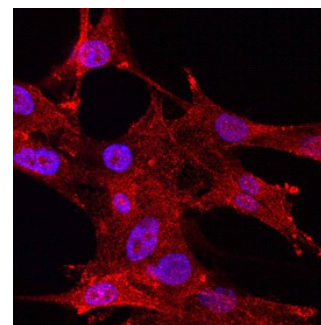
DATA

Flow Cytometry



Detection of Allergin-1 in Human Blood Monocytes by Flow Cytometry. Human peripheral blood monocytes were stained with Mouse Anti-Human CD14 Fluorescein-conjugated Monoclonal Antibody (Catalog # FAB3832F) and either (A) Mouse Anti-Human Allergin-1 Monoclonal Antibody (Catalog # MAB7638) or (B) Mouse IgG₁ Isotype Control (Catalog # MAB002) followed by Allophycocyanin-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # F0101B).

Immunocytochemistry



Allergin-1 in U-87 MG Human Cell Line. Allergin-1 was detected in immersion fixed U-87 MG human glioblastoma/astrocytoma cell line using Mouse Anti-Human Allergin-1 Monoclonal Antibody (Catalog # MAB7638) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the Northern-Lights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
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

MCA32 (Mast Cell Antigen; also Allergin-1 and c17orf60) is a 70 kDa member of the Ig Superfamily. It is expressed on mast cells, basophils, neutrophils and macrophages, and is reported to negatively regulate allergic mediator release from mast cells. In particular, MCA32 interacts with FcεRI. Upon IgE mediated FcεRI aggregation and activation, Allergin-1 recruits Tyr phosphatases to a FcεRI tetrameric complex, dampening IgE receptor downstream signaling. Mature human Allergin-1 is a monomeric type I transmembrane glycoprotein that is 324 amino acids (aa) in length. It contains two C2-type Ig domains (aa 35-118 and 123-217) in the extracellular region (aa 20-227), plus a 95 aa cytoplasmic domain that possesses two ITIM motifs. Two 40 kDa splice variants exist that show deletions of the Ig-like domains. One isoform termed Allergin-1S1 is missing aa 128-217, while a second isoform called Allergin-1S2 is missing aa 33-122. This second isoform represents the antigen used for immunization in this product (GenBank BAJ08253). Over aa 29-131, the Allergin-1S2 isoform shares 100% sequence identity with human Allergin-1L full length isoform and only 24% aa sequence identity with mouse Allergin-1.