

Phagocytosis Research Tools



Phagocytosis is carried out primarily by monocytes/macrophages, neutrophils, and dendritic cells, the dedicated phagocytic cells of the immune system. These cells provide the first line of defense against invading pathogens and recycle dead cells that often arise through apoptosis. Furthermore, this process can stimulate the adaptive immune response through the presentation of foreign antigens. Cayman Chemical's assay kits and biochemicals for phagocytosis provide reagents and methods for studying these processes in cell culture under a variety of experimental conditions.

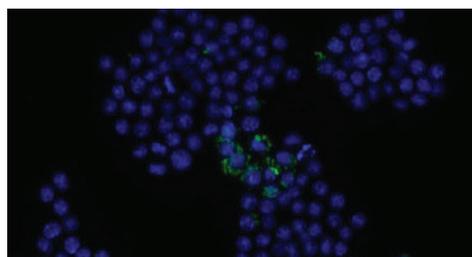
Phagocytosis Assay Kits

Cayman's phagocytosis assay kits allow for kinetic studies of phagocytosis at the single-cell level and offer you the choice of fluorophores that are highly multiplexable and compatible with applications such as antibody staining of various cell types within complex populations.

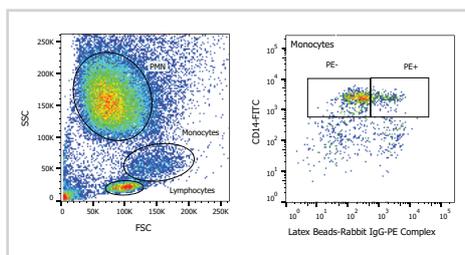
- Validated in human peripheral blood monocytes, mouse peritoneal macrophages, and phagocytic cell lines
- Phagocytosis detectable in 1-4 hours at 37°C
- Assess by flow cytometry or fluorescence microscopy

Item No.	Product Name	Phagocytic Target	Ex. Max. (nm)	Em. Max. (nm)
601370	<i>E. coli</i> Phagocytosis Assay Kit	FITC-labeled, heat-inactivated <i>E. coli</i> bacteria	490	525
500290	Phagocytosis Assay Kit (IgG FITC)	FITC-labeled rabbit IgG-coated latex beads	490	525
600540	Phagocytosis Assay Kit (IgG PE)	Phycoerythrin-labeled rabbit IgG-coated latex beads	465 (488*)	578
601480	Phagocytosis Assay Kit (IgG-DyLight™ 405)	DyLight™ 405-labeled, rabbit IgG-opsonized latex beads	405	450
601490	Phagocytosis Assay Kit (IgG-DyLight™ 633)	DyLight™ 633-labeled, rabbit IgG-opsonized latex beads	633	658

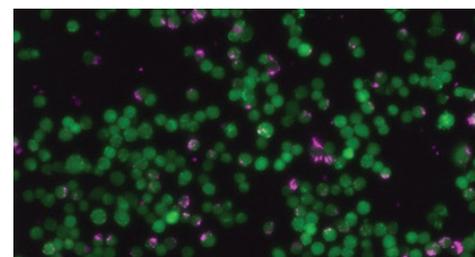
*wavelength compatible with FC



Phagocytosis Assay Kit (IgG FITC) – RAW 264.7 cell phagocytose opsonized particles.



Phagocytosis Assay Kit (IgG PE) – Peripheral blood monocytes (CD14⁺) phagocytose opsonized particles.

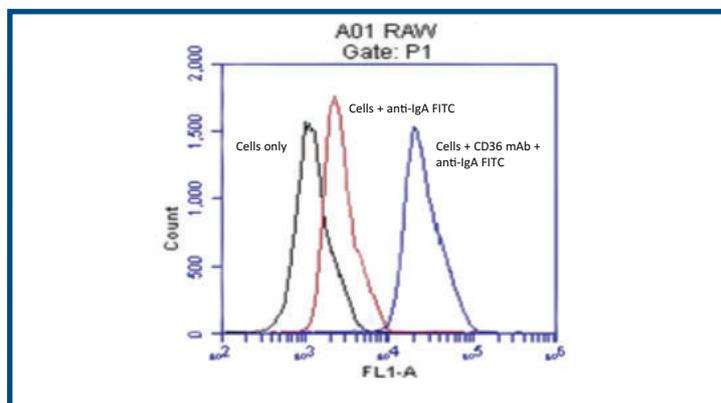


Phagocytosis Assay Kit (IgG-DyLight™ 633) – RAW 264.7 cells take up IgG-coated latex beads.

To view a complete list of our phagocytosis research tools, visit us online at www.caymanchem.com

Assay Kit, Protein, and Antibodies

Item No.	Product Name
501550	Annexin A1 (human) ELISA Kit
19881	Annexin A1 (human, recombinant)
19707	Annexin A1 Monoclonal Antibody (Clone 3F5)
19708	Annexin A1 Polyclonal Antibody
188150	CD36 Monoclonal Antibody (Clone JC63.1)
10009893	CD36 Monoclonal Antibody (Clone JC63.1) (Low Endotoxin)
10009870	CD36 Monoclonal FITC Antibody (Clone JC63.1)
100011	CD36 Polyclonal Antibody



CD36 Monoclonal Antibody (Clone JC63.1) – Flow cytometry with RAW 264.7 cells

Biochemicals

Item No.	Product Name	Summary
10960	Bisdemethoxycurcumin	Activates macrophage phagocytosis and, with 1 α ,25-dihydroxy vitamin D ₃ , stimulates amyloid- β clearance by macrophages (optimal stimulation at 100 nM BDMC)
11328	Cytochalasin B	A cell-permeable mycotoxin that blocks cell division, migration, phagocytosis, exocytosis, chemotaxis, and glucose transport Also available: Cytochalasin A, C, D, E, H, and J (Item Nos. 11327, 11329, 11330, 11331, 18434, and 18443)
9000785	3-Deazaadenosine	Inhibits leukocyte adhesion and chemotaxis, lymphocyte-mediated cytolysis, phagocytosis, degranulation, and NF- κ B signaling
11433	Gliotoxin	An immunosuppressive mycotoxin that induces apoptosis in monocytes and dendritic cells and reduces phagocytosis by neutrophils
15253	14(S)-HDHA	An oxygenation product of DHA that serves as a precursor to maresin 1
16983	Lactosylceramides (bovine brain)	A sphingolipid expressed on the plasma membrane of human phagocytes
10878	Maresin 1	Reduces infiltration of neutrophils into the mouse peritoneum and increases phagocytosis of FITC-labeled zymosan A by isolated mouse macrophages
16369	Maresin 2	Reduces neutrophil infiltration in a mouse model of peritonitis and enhances human macrophage phagocytosis of zymosan A
17007	MCTR1	Reduces neutrophil infiltration, shortens the inflammatory resolution period, and increases phagocytosis of <i>E. coli</i> by macrophages Also available: MCTR2 (Item No. 17008) and MCTR3 (Item No. 19067)
19181	MLCK Inhibitor Peptide 18	A selective, cell-permeable inhibitor of MLCK (IC ₅₀ = 50 nM); decreases phagocytosis of C3bi-opsonized and non-opsonized myelin by primary mouse microglia
16556	cis,cis-Octadeca-9,12-dienol	Used to coat latex beads for phagocytosis assays
10007358	Palmitic Acid methyl ester	Inhibits phagocytosis and decreases cell viability
18725	Pidotimod	A synthetic dipeptide with immunomodulatory properties on both innate and adaptive immune responses <i>in vitro</i> studies
13834	Resolvin D3	Reduces neutrophil infiltration <i>in vivo</i> in both mouse peritonitis and dermal inflammation; enhances macrophage phagocytosis and efferocytosis
13835	Resolvin D4	Reduces neutrophil infiltration <i>in vivo</i> and promotes phagocytosis of bacteria, opsonized zymosan A, and apoptotic neutrophils by human macrophages
10007280	Resolvin D5	Stimulates the phagocytosis of <i>E. coli</i> by human macrophages
19147	URMC-099	An orally bioavailable, brain-penetrant MLK inhibitor (IC ₅₀ s = 19, 42, 14, and 150 nM for MLK1, MLK2, MLK3, and the related MLK family member DLK, respectively)
18137	UDP (sodium salt)	A specific agonist of P2Y ₆ receptors (EC ₅₀ = 13 nM for human P2Y ₆), stimulating the production of inflammatory mediators and phagocytosis
15047	Wiskostatin	A cell-permeable, selective inhibitor of neural WASP (N-WASP, IC ₅₀ = ~10 μ M)