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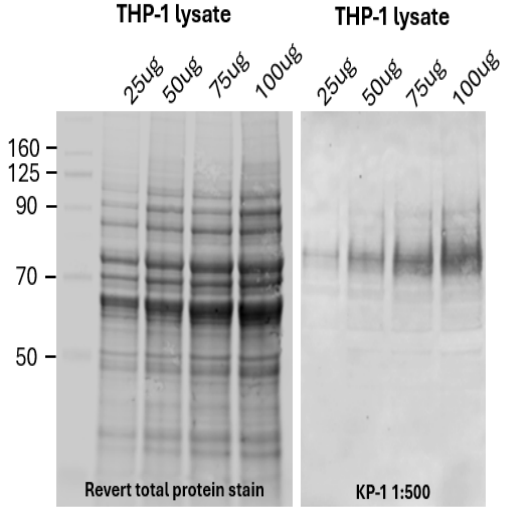
Anti-Human CD68

Purified No Carrier Protein

Hybridoma Monoclonal Antibody

Product Information

Product No.:	C920
Clone:	KP1
Isotype:	Mouse IgG1 κ



Product Description

Specificity:
Anti-CD68 antibody (clone KP1) activity is directed against human CD68.

Antigen Distribution:
CD68 is found in the cytoplasm of monocytes/macrophages, fibroblasts, human peripheral blood lymphocytes, neutrophil primary and mast cell granules, large granular lymphocytes, basophils, basal epithelial cell layers, renal glomeruli, myeloid cells, endothelial cells, retinal epithelial cells, osteoblasts, fibroblast-like cells from bone marrow, and a wide-range of lymphoid neoplasms. CD68 is predominantly located in lysosomal membranes, with a small amount on the cell surface. Additionally, CD68 can be expressed in most hematopoietic cell lines by phorbol-induced differentiation; soluble CD68 can also be found in serum and urine.

Background:
CD68 is a heavily glycosylated type I transmembrane glycoprotein belonging to the lysosomal-associated membrane protein (LAMP) family and may play a role in endocytosis or lysosomal traffic and phagocytic activities[1]. CD68 localizes to endosome- or lysosome-like structures[2]. Additionally, LAMPS have been implicated in tumor cell metastasis and are over-expressed on the surface of metastatic compared with nonmetastatic cell lines[3].

KP1 was originally used as a pan-monocytic/macrophage marker against CD68; however, CD68 is not a macrophage specific antigen and KP1 is known to stain neutrophils and other non-macrophage-like cells[4,5,6,7,8]. KP1 reacts against CD68 in a wide range of healthy[4] and disease-associated (rheumatoid arthritis and osteoarthritis)[5] tissues as well as a variety of neoplasms[9], tumor cell lines[7], and tumor-associated macrophages [8]. KP1 detects a fixation-resistant epitope[10] that is likely glycan-based[1,9] which is shared by many cell types[7].

KP1 was developed by immunizing Balb/c mice against a lysosomal fraction of human lung [10]. Hybridoma supernatants derived from spleen cells were screened on cryostat human lung and tonsil sections as well as paraffin wax sections of lung tissue fixed in formol saline.

Known Reactivity Species:
Human

Products are for research use only. Not for use in diagnostic or therapeutic procedures.

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Format:
Purified No Carrier Protein

Formulation
This monoclonal antibody is aseptically packaged and formulated in 0.01 M phosphate buffered saline (150 mM NaCl) PBS pH 7.2 - 7.4 with no carrier protein, potassium, calcium or preservatives added. Due to inherent biochemical properties of antibodies, certain products may be prone to precipitation over time. Precipitation may be removed by aseptic centrifugation and/or filtration.

Purity
≥90% monomer by analytical SEC and SDS-Page

Storage and Stability
Functional grade preclinical antibodies may be stored sterile as received at 2-8°C for up to one month. For longer term storage, aseptically aliquot in working volumes without diluting and store at -70°C. **Avoid Repeated Freeze Thaw Cycles.**

Product Preparation
Purified antibodies are manufactured in an animal free facility using only *in vitro* protein free cell culture techniques and are purified by a multi-step process including the use of protein A or G to assure extremely low levels of endotoxins, leachable protein A or aggregates.

Applications
Applications and Recommended Usage (Quality Tested By Leinco):

FC[5, 10, 12],
WB[4, 7, 10],

Other Applications Reported in Literature:

IHC[5, 7, 8, 9, 10, 11],
IHC FFPE[10],
IP[1, 4, 10, 12],
ICFC[5, 7],
ICC[4, 12],
Dot[12],
B[12],
EM[2],

Country of Origin
USA

References
1. Holness CL, Simmons DL. Blood. 81(6):1607-1613. 1993.
2. Saito N, Pulford KA, Breton-Gorius J, et al. Am J Pathol. 139(5):1053-1059. 1991.
3. Saitoh O, Wang WC, Lotan R, et al. J Biol Chem. 267(8):5700-5711. 1992.
4. Pulford KA, Sipos A, Cordell JL, et al. Int Immunol. 2(10):973-980. 1990.
5. Kunisch E, Fuhrmann R, Roth A, et al. Ann Rheum Dis. 63(7):774-784. 2004.
6. Beranek JT. Ann Rheum Dis. 64(2):342-343; author reply 343-344. 2005.

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