

# Monocyte/Macrophage Marker (KUL01): sc-52603

## BACKGROUND

IgG<sub>1</sub> clone (5/9) is derived from mouse immunization with a cell suspension containing osteoclasts from osteoclastomas, and is a suitable human macrophage cell marker. The (5/9) antigen is present in osteoclasts and (5/9) may be useful for the identification of osteoclasts in tissues to study developmental pathobiology. Macrophages arise from hematopoietic stem cells in the bone marrow. Myeloid progenitors enter circulation, migrate to tissues and then differentiate into macrophages. Macrophages mediate phagocytosis of opsonized microorganisms mediated by Fc receptors and complement receptors, killing of ingested microorganisms, digestion and presentation of antigens to T and B lymphocytes, and secretion.

## REFERENCES

- Denburg, J.A., Telizyn, S., Messner, H., Lim, B., Jamal, N., Ackerman, S.J., Gleich, G.J. and Bienenstock, J.I. 1985. Heterogeneity of human peripheral blood eosinophil-type colonies: evidence for a common basophil-eosinophil progenitor. *Blood* 66: 312-318.
- Scordamaglia, A., Orlandini, A., Zucchi, L., Caria, M., Zocchi, E., Bisetti, A. and Canonica, G.W. 1987. The immunological events leading to the "in vitro" response to PPD. *Allergol. Immunopathol.* 15: 83-87.
- Margolick, J.B., Volkman, D.J., Goldstein, H. and Fauci, A.S. 1988. Production of phagocytosis-inducing factor and expression of 4B4 antigen by cloned human T cells before and after transformation with HTLV-I. *Cell. Immunol.* 111: 196-203.
- Mast, J., Goddeeris, B.M., Peeters, K., Vandesande, F. and Berghman, L.R. 1998. Characterisation of chicken monocytes, macrophages and interdigitating cells by the monoclonal antibody KUL01. *Vet. Immunol. Immunopathol.* 61: 343-357.
- Wigley, P., Berchieri, A., Page, K.L., Smith, A.L. and Barrow, P.A. 2001. *Salmonella enterica* serovar the reproductive tract during persistent, disease-free carriage in chickens. *Infect. Immun.* 69: 7873-7879.
- Gordon, S. and Taylor, P.R. 2005. Monocyte and macrophage heterogeneity. *Nat. Rev. Immunol.* 5: 953-964.
- Hume, D.A. 2006. The mononuclear phagocyte system. *Curr. Opin. Immunol.* 18: 49-53.
- Roodman, G.D. 2006. Regulation of osteoclast differentiation. *Ann. N.Y. Acad. Sci.* 1068: 100-109.

## SOURCE

Monocyte/Macrophage Marker (KUL01) is a mouse monoclonal antibody raised against peripheral blood mononuclear cell leukocytes of chicken origin.

## PRODUCT

Each vial contains 100 µg IgG<sub>1</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Monocyte/Macrophage Marker (KUL01) is available conjugated either phycoerythrin (sc-52603 PE, 100 tests in 2 ml) or fluorescein (sc-52603 FITC, 100 tests in 2 ml), for WB (RGB), IF, IHC(P) and FCM.

## APPLICATIONS

Monocyte/Macrophage Marker (KUL01) is recommended for detection of monocytes and macrophages as well as interdigitating cells and activated microglia cells of avian origin by flow cytometry (1 µg per 1 x 10<sup>6</sup> cells); non cross-reactive with B (Bu1 positive) or T (CD3 positive) lymphocytes.

## SELECT PRODUCT CITATIONS

- Zhou, J., Tsai, Y.T., Weng, H., Baker, D.W. and Tang, L. 2011. Real time monitoring of biomaterial-mediated inflammatory responses via macrophage-targeting NIR nanoprobes. *Biomaterials* 32: 9383-9390.
- Ferreira, T.Z., Kindlein, L., Flees, J.J., Shortnacy, L.K., Vieira, S.L., Nascimento, V.P., Meloche, K.J. and Starkey, J.D. 2020. Characterization of pectoralis major muscle satellite cell population heterogeneity, macrophage density, and collagen infiltration in broiler chickens affected by wooden breast. *Front. Physiol.* 11: 529.
- Leiva, S.F., Avila, L.P., Abascal-Ponciano, G.A., Flees, J.J., Sweeney, K.M., Wilson, J.L., Starkey, J.D. and Starkey, C.W. 2022. Combined maternal and post-hatch dietary supplementation of 25-hydroxycholecalciferol alters early post-hatch broiler chicken duodenal macrophage and crypt cell populations and their mitotic activity. *Front. Vet. Sci.* 9: 882566.
- Keel, A.J., Calderon, A.J., Tejada, O.J., Starkey, J.D. and Starkey, C.W. 2022. Dietary protein source and litter condition alter broiler chicken intestinal macrophage and mitotically active cell populations. *Front. Vet. Sci.* 9: 894587.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.