SANTA CRUZ BIOTECHNOLOGY, INC.

Granulocytes (HIS48): sc-19613

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Blood consists of a solid component that includes erythrocytes, leukocytes and platelets, and a liquid component known as plasma, which is a buffered solution of proteins and salts. Innate and adaptive immune responses rely on the function of leukocytes, which are nucleated white blood cells that destroy invading cells and remove debris. Innate immunity depends largely on the granulocyte class of leukocytes characterized by the presence of dense cytoplasmic granules. Granulocytes are circulating leukocytes that are derived from myeloid progenitor cells in the bone marrow and include basophils, eosinophils and neutrophils. Basophils are involved in protecting mucosal surfaces and influence vascular permeability. Eosinophils are activated by lymphocytes of the adaptive immune response and promote host defense against parasitic infections. Neutrophils are phagocytic cells and are the most abundant and important type of cell in the innate immune response. The granulocyte class ensures successful immune responses against newly encountered pathogens.

REFERENCES

1. Daviesm, P., et al. 1976. The macrophage as a secretory cell in chronic inflammation. Agents Actions 6: 60-74.
2. Janeway, C.A., Jr., et al. 1997. Immunobiology: the immune system in health and disease. New York: Garland Publishing.

SOURCE

Granulocytes (HIS48) is a mouse monoclonal antibody raised against rat bone marrow cells.

PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Granulocytes (HIS48) is available conjugated to either phycoerythrin (sc-19613 PE) or fluorescein (sc-19613 FITC), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

APPLICATIONS

Granulocytes (HIS48) is recommended for detection of an antigen found on all Granulocytes, also found on cells of the erythoid lineage at various stages of maturations in bone marrow of mouse and rat origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10^6 cells).

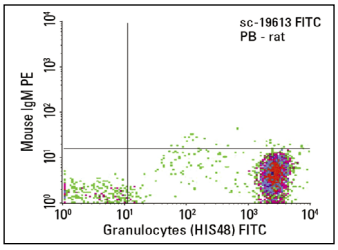
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 2) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

STORAGE

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

DATA



Granulocytes Subset (HIS48) FITC: sc-19613 FITC. FCM analysis of rat peripheral blood leukocytes. Quadrant markers were set based on the isotype control, normal Arm. hamster IgG-FITC: sc-2864.

SELECT PRODUCT CITATIONS

1. Little, M.A., et al. 2005. Antineutrophil cytoplasm antibodies directed against myeloperoxidase augment leukocyte-microvascular interactions *in vivo*. Blood 106: 2050-2058.
2. Stanojevic, S., et al. 2006. β-endorphin differentially affects inflammation in two inbred rat strains. Eur. J. Pharmacol. 549: 157-165.
3. Miller, A.P., et al. 2007. Aged rats lose vasoprotective and anti-inflammatory actions of estrogen in injured arteries. Menopause 14: 251-260.
4. Böttcher-Haberzeth, S., et al. 2012. Matriderm® 1 mm versus Integra® Single Layer 1.3 mm for one-step closure of full thickness skin defects: a comparative experimental study in rats. Pediatr. Surg. Int. 28: 171-177.
5. Klar, A.S., et al. 2017. Comparison of *in vivo* immune responses following transplantation of vascularized and non-vascularized human dermo-epidermal skin substitutes. Pediatr. Surg. Int. 33: 377-382.
6. Micka-Michalak, K., et al. 2019. Induction of angiogenic and inflammation-associated dermal biomarkers following acute UVB exposure on bio-engineered pigmented dermo-epidermal skin substitutes *in vivo*. Pediatr. Surg. Int. 35: 129-136.
7. Déry, L., et al. 2021. Chemoattraction of neoplastic glial cells with CXCL10, CCL2 and CCL11 as a paradigm for a promising therapeutic approach for primary brain tumors. Int. J. Mol. Sci. 22: 12150.
8. Michalak-Micka, K., et al. 2022. Expression profile of CD157 reveals functional heterogeneity of capillaries in human dermal skin. Biomedicines 10: 676.
9. Li, X., et al. 2023. P2X7R mediates the synergistic effect of ATP and MSU crystals to induce acute gouty arthritis. Oxid. Med. Cell. Longev. 2023: 3317307.

RESEARCH USE

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