**BACKGROUND**

A monocyte is a leukocyte produced by the bone marrow from hematopoietic stem cell precursors called monoblasts. Monocytes circulate in the bloodstream and move into tissues throughout the body, where they protect against blood-borne pathogens. Monocytes are responsible for phagocytosis (ingestion) of foreign substances by using intermediary proteins such as antibodies or complements that coat the pathogen, or they can bind directly to the microbe through pattern-recognition receptors that recognize pathogens. Monocytes are also capable of killing infected host cells through a process termed antibody-mediated cellular cytotoxicity. Monocytes that migrate from the bloodstream to other tissues are called macrophages. Macrophages possess a large smooth nucleus, a large area of cytoplasm and many internal vesicles for processing foreign material. Macrophages are suspected to be the predominant cells involved in triggering atherosclerosis. Specific antigens expressed on sets of monocytes or macrophages may aid in the identification of these types of cells.

**REFERENCES**


**SOURCE**

Monocytes Marker (ER-HR3) is a rat monoclonal antibody raised against adherent bone marrow cells of mouse origin.

**PRODUCT**

Each vial contains 200 µg IgG2c in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Available as fluorescein conjugate for flow cytometry, sc-52706 FITC, 100 tests.

**APPLICATIONS**

Monocytes Marker (ER-HR3) is recommended for detection of the majority of blood monocytes and a subset of mature resident macrophages (especially those located in hemopoietic organs) of mouse origin by immunofluorescence and 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); non cross-reactive with other leukocytes.

**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 or our catalog for detailed protocols and support products.