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BM4108 Monoclonal Antibody To Human Dendritic Cells - Purified

Alternate names: Marker for Complement C9 Neoepitope On Follicular Dendritic Cells, Membrane attack complex, Terminal complement complex

Quantity: 0.2 mg

Concentration: 0.4 mg/ml (after reconstitution)

Background: Follicular dendritic cells and sinus lining cells in lymph node and tonsil, and blood dendritic cells express the X-11 antigen. X-11$^+$ blood dendritic cells show typical dendritic veils and are the most potent stimulator cells in an allogenic mixed leukocyte reaction when compared with other leukocytes. X11$^+$ cells strongly react with anti S100 and weakly with anti CD68. The literature suggests that X-11$^+$ cells are dendritic cells of monocytic origin.

Host / Isotype: Mouse / IgG1

Recommended Isotype Controls: SM10P (for use in human samples), AM03095PU-N

Clone: X-11

Immunogen: Enriched Human blood dendritic cells.
Remarks: The antigen is a neoepitope of C9 after assembly in the terminal complement complex.
Epitope sequence has not been determined.

Format:
State: Lyophilized purified Ig fraction
Purification: Affinity Chromatography
Buffer System: PBS, pH 7.2
Preservatives: 0.1% Kathon
Stabilizers: 5 mg/ml BSA
Reconstitution: Restore with 0.5 ml distilled water.

Applications:
Immunohistochemistry on Frozen Sections: 0.4 µg/ml (1/1000).
Immunohistochemistry on Paraffin Sections: 2 µg/ml (1/200). Microwave pretreatment for antigen retrieval is recommended.
Has been described to work in **FACS.**
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity: Monoclonal antibody Clone *X-11* detects a Neoepitope of the Complement Component C9 which is expressed when C9 is assembled in the terminal complement complex (TCC).
Antigen Distribution
Isolated Cells: Positive on dendritic cells in the peripheral blood. It is absent from all other blood cells. LPS or IFN-gamma stimulated monocytes do not express the antigen.
Tissues Sections: The antigen is found on follicular dendritic cells of lymph nodes in the B-cell dependent areas. Some macrophages of the tonsil stain also positive with the antibody. It is absent from the thymus and the skin. In the spleen, trabeculae are

stained positively by X-11.

Species Reactivity:

Tested: Human: Follicular dendritic (reticulum) cells, C9 neoepitope. No cross reaction observed when tested with polymerized complement C9 of 38 different species, including Mouse, Rat, Rabbit and Guinea Pig.

Storage:

Store lyophilized at 2-8°C for 6 months or at -20°C long term.
After reconstitution store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C long term.
Avoid repeated freezing and thawing.
Shelf life: one year from despatch.

General Readings:

1. Halstensen TS, Mollnes TE, Brandtzaeg P. Terminal complement complex (TCC) and S-protein (vitronectin) on follicular dendritic cells in human lymphoid tissues. Immunology. 1988 Oct;65(2):193-7. PubMed PMID: 2461343.
2. Zwirner J, Felber E, Schmidt P, Riethmüller G, Feucht HE. Complement activation in human lymphoid germinal centres. Immunology. 1989 Feb;66(2):270-7. PubMed PMID: 2925226.
3. Würzner R, Xu H, Franzke A, Schulze M, Peters JH, Götze O. Blood dendritic cells carry terminal complement complexes on their cell surface as detected by newly developed neoepitope-specific monoclonal antibodies. Immunology. 1991 Sep;74(1):132-8. PubMed PMID: 1718850.
4. Peters JH, Ruppert J, Gieseler RK, Najar HM, Xu H. Differentiation of human monocytes into CD14 negative accessory cells: do dendritic cells derive from the monocytic lineage? Pathobiology. 1991;59(3):122-6. PubMed PMID: 1715710.
5. Tiemssen, C.T. et al.: Characterization of Human Blood Dendritic Cells: Cytokine Profiles. Abstr. 3rd Int. Symposium on Dendritic Cells in fundamental and Clinical Immunology, Annecy June 1994.

Protocols:

Protocol with frozen, ice-cold acetone-fixed sections:
The whole procedure is performed at room temperature
1. Wash in PBS
2. Block endogenous peroxidase
3. Wash in PBS
4. Block with 10% normal goat serum in PBS for 30min. in a humid chamber
5. Incubate with primary antibody (dilution see datasheet) for 1h in a humid chamber
6. Wash in PBS
7. Incubate with secondary antibody (peroxidase-conjugated goat anti mouse IgG+IgM (H+L) minimal-cross reaction to human) for 1h in a humid chamber
8. Wash in PBS
9. Incubate with AEC substrate (3-amino-9-ethylcarbazol) for 12min.
10. Wash in PBS
11. Counterstain with Mayer's hemalum

Protocol with formalin-fixed, paraffin-embedded sections:
The whole procedure is performed at room temperature
1. Deparaffinize and rehydrate tissue section
2. Place slide in a cuvette with 250ml 0.01M citrate buffer, pH 6.0
3. Heat slide in a microwave oven for 2 x 7min. at 700Watt
4. Leave slide in the buffer for 20min for cooling

5. Wash in distilled water
6. Block endogenous peroxidase
7. Wash in PBS
8. Block with 10% normal goat serum in PBS for 30min. in a humid chamber
9. Incubate with primary antibody (dilution see datasheet) for 1h in a humid chamber
10. Wash in PBS
11. Incubate with secondary antibody (peroxidase-conjugated goat anti mouse IgG+IgM (H+L) minimal-cross reaction to human) for 1h in a humid chamber
12. Wash in PBS
13. Incubate with AEC substrate (3-amino-9-ethylcarbazol) for 12min.
14. Wash in PBS
15. Counterstain with Mayer's hemalum

Pictures:

Human Spleen Paraffin Section stained with BM4108 (Clone X-11)