ANTIGEN: CD18

ANTISERUM: Dr. Peter Moore, University of California-Davis (pfmoore@ucdavis.edu). Mouse monoclonal antibody. Clone: CA16.3C10. Isotype: IgG₁

IMMUNOGEN:

PRESENTATION: Tissue culture supernatant.

PROTEIN CONCENTRATION (mg/ml):

IMMUNOGLOBULIN CONCENTRATION (µg/ml):

REACTIVITY ACCORDING TO THE LITERATURE:

The β₂ integrins (CD11/CD18) are the major adhesion molecule family of leukocytes. Most leukocytes express one or more members of this family. CD18 is the β₂ subunit which pairs with one of four α subunits to form a heterodimer. Hence, staining for CD18 indicates the presence of the β₂ subunit, but does not indicate which of the 4 integrin molecules is present. The four alpha subunits are: CD11a (all leukocytes), CD11b (granulocytes, monocytes, some macrophages), CD11c (granulocytes, monocytes, dendritic antigen presenting cells), α₄ (CD8 T-cell subpopulation including large granular lymphocytes, macrophages and gamma-delta T cells in splenic red pulp). Macrophages and granulocytes express 10-fold more CD18 than do lymphocytes.

CD18 is expressed by all leukocytes (including histiocytes - macrophages, Langerhan's cells and dendritic cells) but no platelets. Macrophages and granulocytes express 10-fold more CD18 than do lymphocytes. In formalin-fixed tissues, and after antigen retrieval, lymphocytes may not be positive for CD18 (use CD3, CD79a to rule out lymphoid origin of CD18-negative cells).

STAINING PROCEDURE ACCORDING TO MANUFACTURER:

Immunoperoxidase on cryostat sections: use acetone as fixative not methanol (it may destroy some epitopes).

Formalin-fixed, paraffin-embedded tissue sections: It is necessary a heat based antigen retrieval. Find the optimal dilution starting the titration at 1/10.

Store the antibody at 4°C.


METHOD: LSAB+/PO. 1h, RT.

SPECIES CROSS-REACTIVITY: Dog.

CELLS/TISSUES STAINED (canine tissues):

Spleen: Numerous cells in the red pulp (presumably mainly macrophages). Lymphoid follicles are more weakly stained.
Lymph node: Lymphocytes of the paracortex (T cells) are much stronger stained that follicular lymphocytes (B cells) that have some staining also in dendritic follicular cells. Histiocytes in the medullary sinuses are strongly stained.

REFERENCES: