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Product datasheet for AM03211PU-N

Cd68 Mouse Monoclonal Antibody [Clone ID: ED1]

Product data:

Product Type:	Primary Antibodies
Clone Name:	ED1
Applications:	FC, IHC, IP, WB
Recommended Dilution:	**Immunohistochemistry on Paraffin Sections:** 10 µg/ml (1/100), no antigen retrieval required. **Immunohistochemistry on Frozen Sections:** 0.5-1 µg/ml (1/1000-1/2000). **Western Blot.** **Immunoprecipitation.** **FACS** (preferably on permeabilized cells). ***Suggested Positive Control:*** Rat spleen.
Reactivity:	Rat
Host:	Mouse
Isotype:	IgG1
Clonality:	Monoclonal
Immunogen:	Rat spleen cells.
Specificity:	This Monoclonal Antibody ED1 is useful for detecting Rat monocytes and macrophages and isolated dendritic (veiled) cells in the blood. The antibody recognises a single chain glycoprotein of 90-100kDa. Weak cell surface expression also occurs. The antigen is expressed by the majority of tissue macrophages and weakly by peripheral blood granulocytes. Studies have shown that the antigen recognised by ED1 has many characteristics in common with Mouse macrosialin and Human CD68. **Antigen, Epitope:** CD68; ED1 recognises a 92kD cytoplasmic protein. The epitope has not been further characterized. **Antigen Distribution:** The antigen is found on 90% of monocytes in the peripheral blood. It is also expressed by 98% of isolated dendritic (veiled) cells.
Formulation:	PBS, pH 7.2 State: Aff - Purified State: Liquid purified Ig fraction Preservative: 0.09% Sodium Azide
Concentration:	1.0 mg/ml

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Purification:	Affinity Chromatography
Conjugation:	Unconjugated
Storage:	Upon receipt, store undiluted (in aliquots) at -20°C. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
Gene Name:	Cd68 molecule
Database Link:	Entrez Gene 287435 Rat Q4FZY1
Background:	The CD68 antigen is a 37kD transmembrane protein that is post-translationally glycosylated to give a protein of 87-115kD. CD68 is specifically expressed by tissue macrophages, Langerhans cells and at low levels by dendritic cells. It could play a role in phagocytic activities of tissue macrophages, both in intracellular lysosomal metabolism and extracellular cell-cell and cell-pathogen interactions. It binds to tissue- and organ-specific lectins or selectins, allowing homing of macrophage subsets to particular sites. Rapid recirculation of CD68 from endosomes and lysosomes to the plasma membrane may allow macrophages to crawl over selectin bearing substrates or other cells.
Synonyms:	Gp110, Macrosialin, Macrophage marker

Note:

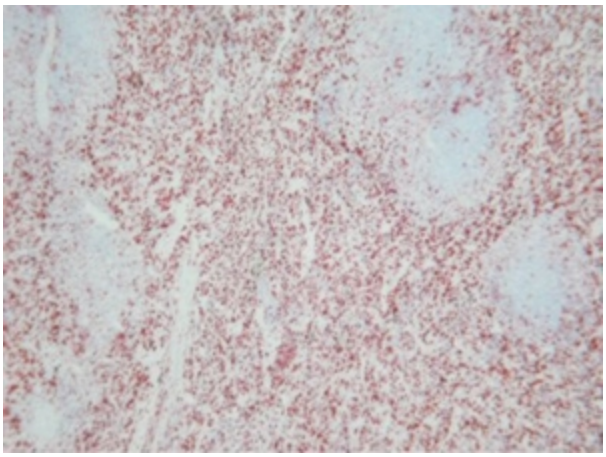
Protocol: **Protocol with frozen, ice-cold acetone-fixed sections:**
(The whole procedure is performed at room temperature)

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 (H+L) minimal-cross reaction to rat) 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. 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 (H+L) minimal-cross reaction to rat) 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.

Product images:



Rat Spleen Frozen Section stained with CD68 antibody clone ED1

Monoclonal Antibody	ED1	ED2	ED3
Staining pattern	Granular, patchy cytoplasmic	Diffuse, membrane	Diffuse, membrane
Spleen			
White pulp			
inner PALS	++	-	+ Weakly
outer PALS	++	+	+ Weakly
follicle	+/-	-	-
marg. metallophils	+/- Weakly	-	+++ Branched
marginal zone	+/- Weakly	-	+++ Branched
Red Pulp	+++	+++	+++ Weakly
Lymph node			
Cortex			
outer cortex	+/- Weakly	-	+++ Subsinusoidal branched
paracortical area	++	+	-
follicles	+/-	-	-
Medulla	+++	+ 10-20%	+++
Capsule	+	+	-
Peyer's patches			
Interfollicular area	+++	++	+ Small groups 3-4 cells
Dome	+	-	-
Follicle-	-	-	-
Villi	+++ Apex	++ Apex basis	-
Lung			
BALT	++	Periphery of BALT	-
Perivascular/peribronchial	+	+++	-
Alveolar	+++	-	-
Thymus			
Cortex	++	++ Branched	-
Medulla	++	-	-/+ Weakly
Corticomedullary area	+++	+++	-
Capsule	+++ Branched	+++ Branched	++ Branched
Liver	+++ Branched	+++ Branched	++ Branched
Bone marrow	+++ Monocytes/ macrophages	++ Macrophages	-

+++ = (Almost) all acid phosphatase-positve cells stained with the monoclonal antibody.
++ = A considerable number stained + = Few stained -/+ = Very few stained or none at all

Distribution and staining pattern of macrophages identified by ED1, ED2 and ED3 in various organs (from Dijkstra et al., 1985, modified).