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BM4017 Monoclonal Antibody to CD205 / DEC-205 - Purified

Alternate names:	C-type lectin domain family 13 member B, CLEC13B, DEC205, LY75, Lymphocyte antigen 75, gp200-MR6
Quantity:	0.1 mg
Concentration:	0.2 mg/ml (after reconstitution)
Background:	Mouse CD205, also known as DEC-205 (dendritic and epithelial cells, 205 kDa). CD205 is an integral membrane glycoprotein involved in antigen uptake, trafficking and presentation that improves the induction of antigen-specific T cell immunity. CD205 is highly expressed by CD8+ dendritic cells (DCs) and also expressed at different levels by bone marrow Gr1+ cells, Langerhans cells, (BMDC) bone marrow derived DCs and thymic epithelial cells. DEC-205 is apparently a receptor involved in antigen-processing by dendritic cells.
Uniprot ID:	Q60767
NCBI:	NP_038853.2
GeneID:	17076
Host / Isotype:	Rat / IgG2a
Recommended Isotype Controls:	SM15P, SM15PX
Clone:	NLDC-145
Immunogen:	Mouse lymph node tissue.
Format:	**State:** Lyophilized purified IgG fraction **Purification:** Affinity Chromatography **Buffer System:** PBS, pH 7.2 **Preservatives:** 0.05% (v/v) Kathon CG **Stabilizers:** 5 mg/ml BSA **Reconstitution:** Restore by adding 0.5 ml distilled water.
Applications:	**Immunohistochemistry on Frozen Sections:** 0.5 µg/ml (1/400). ***Recommended Positive Control:*** Mouse spleen. **Does not react on routinely processed paraffin sections.** 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:

Reacts with nonlymphoid dendritic cells: interdigitating cells (IDC), veiled cells and Langerhans cells, thymic epithelial cells.
Monoclonal antibody NLDC-145 identifies Ia positive interdigitating cells, veiled cells and Langerhans cells of the skin and their in vitro counterparts.
The antigen is expressed at high levels by dendritic cells and thymic epithelial cells.
The antigen detected by NLDC-145 is an integral membrane glycoprotein with an apparent mass of 205kDa, also known as DEC-205.
Species: Mouse.
Other species not tested.

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:

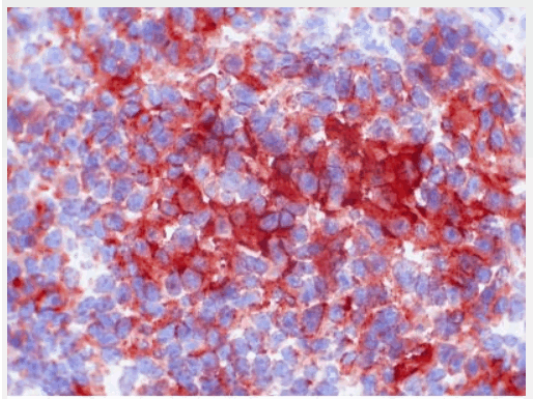
1. Kraal G, Breel M, Janse M, Bruin G. Langerhans' cells, veiled cells, and interdigitating cells in the mouse recognized by a monoclonal antibody. J Exp Med. 1986 Apr 1;163(4):981-97. PubMed PMID: 3950549.
2. Breel M, Mebius RE, Kraal G. Dendritic cells of the mouse recognized by two monoclonal antibodies. Eur J Immunol. 1987 Nov;17(11):1555-9. PubMed PMID: 3678361.
3. Swiggard WJ, Mirza A, Nussenzweig MC, Steinman RM. DEC-205, a 205-kDa protein abundant on mouse dendritic cells and thymic epithelium that is detected by the monoclonal antibody NLDC-145: purification, characterization, and N-terminal amino acid sequence. Cell Immunol. 1995 Oct 15;165(2):302-11. PubMed PMID: 7553896.
4. Martinez del Hoyo, G., P. Martin, H. Hernandez Vargas, S. Ruiz, C. Fernandez Arias, C. Ardavin: Characterization of a common precursor population for dendtiric cells. Nature 415: 1043-47 (2002).

Protocols:

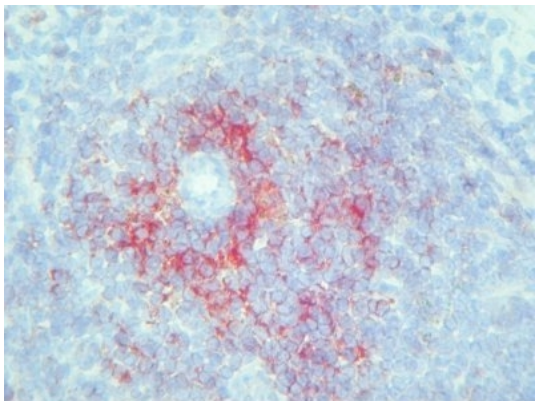
Protocol with frozen, ice-cold acetone-fixed sections:
The whole procedure is performed at room temperature
1. Wash in PBS
2. Block endogenous peroxidase
3. Wash in PBS
4. Block with 10% normal goat serum in PBS for 30min. in a humid chamber
5. Incubate with primary antibody (dilution see datasheet)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

Pictures:

Mouse Spleen Frozen Section stained with BM4017 CD205 Antibody (Clone NLDC-145).



Mouse Spleen Frozen Section stained with BM4017 CD205 Antibody (Clone NLDC-145).



Antigen distribution:

Organ	NLDC-145 staining	Cell type and localization
Spleen	+	IDC in inner PALS
Lymph node	+	IDC in paracortex VC in subcapsular sinus
Peyer's patch	+	IDC in interfollicular T cell areas Villum epithelium, isolated cells in submucosa (VC)
Thymus	+	IDC in medulla Cortical epithelium
Skin	+	Langerhans cells
Brain, Kidney, Liver, Heart	-	
In vitro isolated cells		
Blood, bone marrow	-	
Peritoneal cells	-	
Peritoneal exudate cells*	+	some positive cells (VC?)

* Peritoneal exudate cells were harvested 4 days after intraperitoneal thioglycollate injection.
Tests were carried out on BALB/c and $C_5D_2F_1$ mouse strains.
(G.Kraal et al. see ref. 1, modified)