SouthernBiotech

Mouse Anti-Chicken Monocyte/Macrophage

Cat. No.	Format	Size
8420-01	Purified (UNLB)	0.5 mg
8420-02	Fluorescein (FITC)	0.5 mg
8420-08	Biotin (BIOT)	0.5 mg
8420-09	R-phycoerythrin (PE)	0.1 mg
8420-30	Alexa Fluor [®] 488 (AF488)	0.1 mg
8420-31	Alexa Fluor [®] 647 (AF647)	0.1 mg



Chicken peripheral blood monocytes were stained with Mouse Anti-Chicken Monocyte/Macrophage-PE (SB Cat. No. 8420-09) and Mouse Anti-Chicken CD44-FITC (SB Cat. No. 8400-02).

is

Overview

Clone	KUL01
Isotype	Mouse (BALB/c) IgG ₁ κ
Immunogen	Chicken peripheral blood mononuclear cell leukocytes
Specificity	Chicken Monocyte/Macrophage
Alternate Name(s)	N/A

Description

The monoclonal antibody KUL01 is useful in the study of the development, distribution, function, and ontogeny of the mononuclear phagocyte system (MPS) of the chicken by exclusively recognizing the cells of the MPS. It identifies chicken monocytes and macrophages as well as interdigitating cells and activated microglia cells. This antibody does not react with B (Bu-1⁺) or T (CD3⁺) lymphocytes.

Applications

 $\begin{array}{l} \mathsf{FC}-\mathsf{Quality\ tested\ }^{1,3,4,14-21}\\ \mathsf{IHC}\mathsf{-}\mathsf{FS}-\mathsf{Reported\ in\ literature\ }^{1-9}\\ \mathsf{IHC}\mathsf{-}\mathsf{PS}-\mathsf{Reported\ in\ literature\ }^{10,11}\\ \mathsf{IHC}\mathsf{-}\mathsf{WM}-\mathsf{Reported\ in\ literature\ }^{12}\\ \mathsf{ICC}-\mathsf{Reported\ in\ literature\ }^{6,7,13,14}\\ \mathsf{Sep}-\mathsf{Reported\ in\ literature\ }^{6,9,14,22,23}\\ \end{array}$

Working Dilutions

Flow Cytometry	Purified (UNLB) antibody	\leq 1 μ g/10 ⁶ cells
	FITC, BIOT, and AF488 conjugates	\leq 1 μ g/10 ⁶ cells
	PE conjugate	\leq 0.2 μ g/10 ⁶ cells
	AF647 conjugate	\leq 0.1 μ g/10 ⁶ cells
For flow cytometry, the suggested use of these reagents is in a final vol		volume of 100 μ L
Other Applications	Since applications vary, you should determine the optimum working dilution for the product tha appropriate for your specific need.	

For Research Use Only. Not for Diagnostic or Therapeutic Use.

Handling and Storage

- The purified (UNLB) antibody is supplied as 0.5 mg of purified immunoglobulin in 1.0 mL of borate buffered saline, pH 8.2. No preservatives or amine-containing buffer salts added. Store at 2-8°C.
- The fluorescein (FITC) conjugate is supplied as 0.5 mg in 1.0 mL of PBS/NaN₃. Store at 2-8°C.
- The biotin (BIOT) conjugate is supplied as 0.5 mg in 1.0 mL of PBS/NaN₃. Store at 2-8°C.
- The R-phycoerythrin (PE) conjugate is supplied as 0.1 mg in 1.0 mL of PBS/NaN₃ and a stabilizing agent. Store at 2-8°C. **Do not** freeze!
- The Alexa Fluor[®] 488 (AF488) and Alexa Fluor[®] 647 (AF647) conjugates are supplied as 0.1 mg in 0.2 mL of PBS/NaN₃. Store at 2-8°C.
- Protect fluorochrome-conjugated forms from light. Reagents are stable for the period shown on the label if stored as directed.

Warning

Some reagents contain sodium azide. Please refer to product specific SDS.

References

- 1. Mast J, Goddeeris BM, Peeters K, Vandesande F, Berghman LR. Characterisation of chicken monocytes, macrophages and interdigitating cells by the monoclonal antibody KUL01. Vet Immunol Immunopathol. 1998;61:343-57. (Immunogen, FC, IHC-FS)
- Abdul-Careem MK, Hunter DB, Thanthrige-Don N, Haghighi HR, Lambourne MD, Sharif S. Cellular and cytokine responses associated with dinitrofluorobenzene-induced contact hypersensitivity in the chicken. Vet Immunol Immunopathol. 2008;122:275-84. (IHC-FS)
- van Haarlam DA, van Kooten PJ, Rothwell L, Kaiser P, Vervelde L. Characterisation and expression analysis of the chicken interleukin-7 receptor alpha chain. Dev Comp Immunol. 2009;33:1018-26. (FC, IHC-FS)
- 4. Bader SR, Kothlow S, Trapp S, Schwarz SC, Philipp H, Weigend S, et al. Acute paretic syndrome in juvenile White Leghorn chickens resembles late stages of acute inflammatory demyelinating polyneuropathies in humans. J Neuroinflammation. 2010;7:7. (FC, IHC-FS)
- Levkut M, Revajová V, Lauková A, Ševčíková Z, Spišáková V, Faixová Z, et al. Leukocytic responses and intestinal mucin dynamics of broilers protected with Enterococcus faecium EF55 and challenged with Salmonella Enteritidis. Res Vet Sci. 2012;93:195-201. (IHC-FS)
- Chen YS, Shen PC, Su BS, Liu TC, Lin ČC, Lee LH. Avian reovirus replication in mononuclear phagocytes in chicken footpad and spleen after footpad inoculation. Can J Vet Res. 2015;79:87-94. (IHC-FS, ICC, Sep)
- Reddy VR, Trus I, Desmarets LM, Li Y, Theuns S, Nauwynck HJ. Productive replication of nephropathogenic infectious bronchitis virus in peripheral blood monocytic cells, a strategy for viral dissemination and kidney infection in chickens. Vet Res. 2016;47:70. (IHC-FS, ICC)
- Schokker D, Jansman AJ, Veninga G, de Bruin N, Vastenhouw SA, de Bree FM, et al. Perturbation of microbiota in one-day old broiler chickens with antibiotic for 24 hours negatively affects intestinal immune development. BMC Genomics. 2017;18:241. (IHC-FS)
- 9. Wang D, Sun S, Heidari M. Marek's disease vaccine activates chicken macrophages. J Vet Sci. 2018;19:375-83. (IHC-FS, Sep)
- 10. Teixeira AR, Gomes C, Nitz N, Sousa AO, Alves RM, Guimaro MC, et al. Trypanosoma cruzi in the chicken model: Chagas-like heart disease in the absence of parasitism. PLoS Negl Trop Dis. 2011;5(3):e1000. (IHC-PS)
- 11. Rebel JM, Peeters B, Fijten H, Post J, Cornelissen J, Vervelde L. Highly pathogenic or low pathogenic avian influenza virus subtype H7N1 infection in chicken lungs: small differences in general acute responses. Vet Res. 2011;42:10. (IHC-PS)
- 12. Warchol ME, Schwendener RA, Hirose K. Depletion of resident macrophages does not alter sensory regeneration in the avian cochlea. PLoS One. 2012;7(12):e51574. (IHC-WM)
- Chen YS, Wu HC, Shien JH, Chiu HH, Lee LH. Cloning and characterization of a 7 transmembrane receptor from the adherent cells of chicken peripheral blood mononuclear cells. PLoS One. 2014;9(1):e86880. (ICC)
- 14. Kraaij MD, van Dijk A, Haagsman HP. CATH-2 and LL-37 increase mannose receptor expression, antigen presentation and the endocytic capacity of chicken mononuclear phagocytes. Mol Immunol. 2017;90:118-25. (FC, ICC, Sep)
- ViertIboeck BC, Schweinsberg S, Hanczaruk MA, Schmitt R, Du Pasquier L, Herberg FW, et al. The chicken leukocyte receptor complex encodes a primordial, activating, high-affinity IgY Fc receptor. Proc Natl Acad Sci USA. 2007;104:11718-23. (FC)
 Delter M, Hilleheim D, Harten D, Schwein M, Schwei
- Del Cacho E, Gallego M, Lillehoj HS, López-Bernard F, Sánchez-Acedo C. Avian follicular and interdigitating dendritic cells: isolation and morphologic, phenotypic, and functional analyses. Vet Immunol Immunopathol. 2009;129:66-75. (FC)
 Janardhana V, Broadway MM, Bruce MP, Lowenthal JW, Geier MS, Hughes RJ, et al. Prebiotics modulate immune responses in the gut-associated lymphoid tissue of
- data diverse view of the second view o
- matulova m, stepanova n, stepanova n, stepanova n, ratugnova m, rytova n, et al. Gytokine signaling in spienic leukocytes from vaccinated and non-vaccinated chickens after intravenous infection with Salmonella entertitidis. PLoS One. 2012;7(2):e32346. (FC)
 Formandos Filipa T, Fataro C, Li paperman M, Poirso RC, Lingue A, Como L, et al. Effect of parey. Escherichia cell years on the immunity of scullar Acian Dia.
- 19. Fernandes Filho T, Fávaro C Jr, Ingberman M, Beirão BC, Inoue A, Gomes L, et al. Effect of spray Escherichia coli vaccine on the immunity of poultry. Avian Dis. 2013;57:671-6. (FC)
- 20. Vu Manh T, Marty H, Sibille P, Le Vern Y, Kaspers B, Dalod M, et al. Existence of conventional dendritic cells in Gallus gallus revealed by comparative gene expression profiling. J Immunol. 2014;192:4510-7. (FC)
- Machado PC Jr, Beirão BC, Filho TF, Lourenço MC, Joineau ML, Santin E, et al. Use of blends of organic acids and oregano extracts in feed and water of broiler chickens to control Salmonella Enteritidis persistence in the crop and ceca of experimentally infected birds. J Appl Poult Res. 2014;23:671-82. (FC)
- Wu Z, Rothwell L, Hu T, Kaiser P. Chicken CD14, unlike mammalian CD14, is trans-membrane rather than GPI-anchored. Dev Comp Immunol. 2009;33:97-104. (Sep)
 Rothwell L, Hu T, Wu Z, Kaiser P. Chicken interleukin-21 is costimulatory for T cells and blocks maturation of dendritic cells. Dev Comp Immunol. 2012;36:475-82. (Sep)

Alexa Fluor[®] 488, 647, 700 and Pacific Blue[™] are provided under an agreement between Molecular Probes, Inc. (a wholly owned subsidiary of Invitrogen Corporation), and Southern Biotechnology Associates, Inc., and the manufacture, use, sale or import of this product may be subject to one or more U.S. patents, pending applications, and corresponding non-U.S. equivalents, owned by Molecular Probes, Inc. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The buyer cannot sell or otherwise transfer (a) this product (b) its components or (c) materials made using this product or its components for Commercial Purposes. Commercial Purposes means any activity by a party for consideration and may include, but is not limited to: (1) use of the product or its components in manufacturing; (2) use of the product or its components to provide a service, information, or data; (3) use of the product or its components for therapeutic, diagnostic or prophylactic purposes; or (4) resale of the product or its components, whether or not such product or its components are resold for use in research. For information on purchasing a license to this product for any other use, contact Molecular Probes, Inc., Business Development, 29851 Willow Creek Road, Eugene, OR 97402, USA, Tel: (541) 465-8300. Fax: (541) 335-0504.

> TB8420 09-Jan-19