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Monoclonal Antibody to CD14 - FITC

Alternate names: Monocyte differentiation antigen CD14, Myeloid cell-specific leucine-rich glycoprotein

Catalog No.: AM05857FC-N

Quantity: 0.1 mg

Background: Recent studies suggest that two different epitopes of CD14 exist on pig cells and the distribution of these epitopes differ. One epitope is primarily expressed by monocytes and the second epitope is expressed by granulocytes, but is less accessible.

Uniprot ID: P08571

NCBI: NP_000582

GeneID: 929

Host / Isotype: Mouse / IgG2b

Clone: MIL-2

Immunogen: Porcine peripheral blood lymphocytes

Format:
State: Liquid purified IgG fraction
Purification: Affinity Chromatography on Protein G
Buffer System: PBS
Preservatives: 0.09% Sodium Azide
Stabilizers: 1% BSA
Label: FITC – Fluorescein Isothiocyanate Isomer 1

Applications:
Flow Cytometry.
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity:
This antibody recognises CD14.
Clone *MIL-2* is reported to block the binding of bacterial Lipopolysaccharide (LPS) to monocytes (2).
Species: Pig.
Other species not tested.

Storage:
Store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer.
Avoid repeated freezing and thawing.
This product is photosensitive and should be protected from light.
Shelf life: one year from despatch.

General Readings:
1. Haverson K, Bailey M, Higgins VR, Bland PW, Stokes CR. Characterization of monoclonal antibodies specific for monocytes, macrophages and granulocytes from porcine peripheral blood and mucosal tissues. J Immunol Methods. 1994 Apr 15;170(2):233-45. PubMed PMID: 8158001.
2. Thacker E, Summerfield A, McCullough K, Ezquerra A, Dominguez J, Alonso F, et al.

Summary of workshop findings for porcine myelomonocytic markers. Vet Immunol Immunopathol. 2001 Jul 20;80(1-2):93-109. PubMed PMID: 11445221.
3. Thorgersen EB, Hellerud BC, Nielsen EW, Barratt-Due A, Fure H, Lindstad JK, et al. CD14 inhibition efficiently attenuates early inflammatory and hemostatic responses in Escherichia coli sepsis in pigs. FASEB J. 2010 Mar;24(3):712-22. doi: 10.1096/fj.09-140798. Epub 2009 Oct 19. PubMed PMID: 19841036.
4. Goujon JM, Vandewalle A, Baumert H, Carretier M, Hauet T. Influence of cold-storage conditions on renal function of autotransplanted large pig kidneys. Kidney Int. 2000 Aug;58(2):838-50. PubMed PMID: 10916109.
5. Hauet T, Goujon JM, Vandewalle A, Baumert H, Lacoste L, Tillement JP, et al. Trimetazidine reduces renal dysfunction by limiting the cold ischemia/reperfusion injury in autotransplanted pig kidneys. J Am Soc Nephrol. 2000 Jan;11(1):138-48. PubMed PMID: 10616850.
6. Summerfield A, Guzylack-Piriou L, Schaub A, Carrasco CP, Tâche V, Charley B, et al. Porcine peripheral blood dendritic cells and natural interferon-producing cells. Immunology. 2003 Dec;110(4):440-9. PubMed PMID: 14632641.
7. Vanderheijden N, Delputte PL, Favoreel HW, Vandekerckhove J, Van Damme J, van Woensel PA, et al. Involvement of sialoadhesin in entry of porcine reproductive and respiratory syndrome virus into porcine alveolar macrophages. J Virol. 2003 Aug;77(15):8207-15. PubMed PMID: 12857889.
8. Barratt-Due A, Thorgersen EB, Lindstad JK, Pharo A, Lissina O, Lambris JD, et al. Ornithodoros moubata complement inhibitor is an equally effective C5 inhibitor in pigs and humans. J Immunol. 2011 Nov 1;187(9):4913-9. doi: 10.4049/jimmunol.1101000. Epub 2011 Sep 30. PubMed PMID: 21964028.
9. Hauet T, Goujon JM, Baumert H, Petit I, Carretier M, Eugene M, et al. Polyethylene glycol reduces the inflammatory injury due to cold ischemia/reperfusion in autotransplanted pig kidneys. Kidney Int. 2002 Aug;62(2):654-67. PubMed PMID: 12110031.
10. Kapetanovic R, Fairbairn L, Beraldi D, Sester DP, Archibald AL, Tuggle CK, et al. Pig bone marrow-derived macrophages resemble human macrophages in their response to bacterial lipopolysaccharide. J Immunol. 2012 Apr 1;188(7):3382-94. doi: 10.4049/jimmunol.1102649. Epub 2012 Mar 5. PubMed PMID: 22393154.
11. Piriou-Guzylack, L. (2008) Membrane markers of the immune cells in swine: an update. Vet Res. 39: 54.