

PRODUCT INFORMATION SHEET

Monoclonal antibodies detecting human antigens

CD64

PURE	ASR	REF	IQP-569P	CONC	50 µg/ml
FITC	ASR	REF	IQP-569F	CONC	50 µg/ml
R-PE	ASR	REF	IQP-569R	CONC	50 µg/ml

ASR Analyte Specific Reagent, analytical and performance characteristics are not established. The product comply with the ASR definitions of the U.S. Food & Drug Administration (FDA).



Description

Clone 32.2

Isotype Murine IgG1

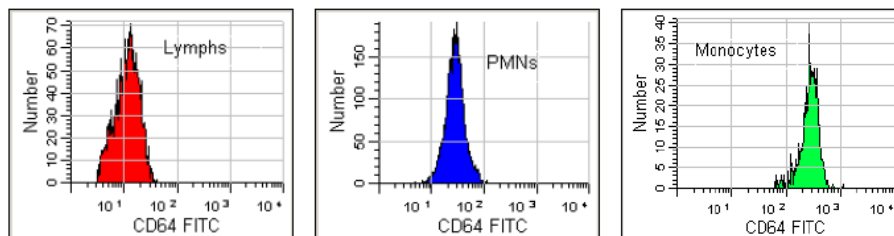
Specificity

CD64 reacts with the Fc gamma receptor 1 (FcγR1), a glycoprotein with a molecular weight of 72kDa. The antigen is a high-affinity receptor for IgG and is able to bind human IgG1 and IgG3. The antigen is expressed on macrophages, monocyte and interferon γ (IFN-γ) and Granulocyte Colony Stimulating Factor (G-CSF) stimulated neutrophils. The antibody binds to a CD64 epitope distinct from the ligand-binding site and from the clone 22 antibody to CD64 epitope. It shows especially high affinity binding to human mononuclear phagocytes and polymorponuclear leukocytes exposed to IFN-γ or G-CSF. Its binding is not blocked in the presence of human IgG or immune complexes.

Application Flow Cytometry

Representative data

Staining with clone 32.2 (CD64) monoclonal antibodies is illustrated by flow cytometry analysis of blood cells. Direct staining was performed using 10 µl of the FITC-conjugated antibody and 100 µl of blood sample.



Handling and Storage

Antibodies are supplied in 0.01 M sodium phosphate, 0.15 M NaCl; pH 7.3, 0.2% BSA, 0.09% sodiumazide (NaN₃). Store the vials at 2-8 °C. Monoclonal antibodies should be protected from prolonged exposure to light. Reagents are stable for the period shown on the vial label when stored properly.

Warranty Products sold hereunder are warranted only to conform to the quantity and contents stated on the label at the time of delivery to the customer. There are no warranties, expressed or implied, which extend beyond the description on the label of the product. IQ Products is not liable for property damage, personal injury, or economic loss caused by the product.

Characterization












To ensure consistently high-quality reagents, each batch of monoclonal antibody is tested for conformance with characteristics of a standard reagent. Representative flow cytometric data is included in this data sheet.

Warning All products contain sodium azide. This chemical is poisonous and hazardous. Handling should be done by trained staff only.

References

- 1 Akerley WL, Guyre PM, Davis BH (1991) Neutrophil activation through high-affinity Fc gamma receptor using a monomeric antibody with unique properties. *Blood* 77, 607-615.
- 2 Pizza F, Davis BH, Hendrickson S, Mitchell J, Pace J, Bigelow NC, DiLauro P, Nagieri T (1996) Adaptation to eccentric exercise: effect on CD64 and CD11b/CD18 expression. *J Applied Physiology* 80, 47-55.
- 3 Schiff D, Rae J, Martin T, Davis BH, Curnutte J (1997) Increased phagocyte CD64 expression and improved Fc-receptor mediated phagocytosis following in vivo recombinant human interferon-g treatment of normal human subjects. *Blood* 90, 2987-94.
- 4 Pan LY, Mendel DB, Zurlo J, Guyre PM (1990) Regulation of the steady state level of Fc gamma RI mRNA by IFN-gamma and dexamethasone in human monocytes, neutrophils, and U-937 cells. *J Immunol* 145, 267-75.
- 5 Petroni KC, Shen L, Guyre PM (1988) Modulation of human polymorphonuclear leukocyte IgG Fc receptors and Fc receptor-mediated functions by IFN-gamma and glucocorticoids. *J Immunol* 140, 3467- 72.
- 6 Davis, BH, Bigelow, NC, Curnutte JT, Ornvold, K (1995) Neutrophil CD64 expression: Potential diagnostic indicator of acute inflammation and therapeutic monitor of interferon-g therapy. *Lab Hematol* 1, 3-12.
- 7 Guyre, PM, Campbell, AS, Kniffin, WD, Fanger, MW (1990) Monocytes and polymorphonuclear neutrophils of patients with streptococcal pharyngitis express increased numbers of type I IgG Fc receptors. *J Clin Invest* 86, 1892-1986.
- 8 Davis BH (2005) Improved diagnostic approaches to infection/sepsis detection. *Expert Rev Mol Diagn* 5:193 – 207.
- 9 Herra CM, Keane CT, Whelan A (1996) Increased expression of Fc gamma receptors on neutrophils and monocytes may reflect ongoing bacterial infection. *Journal of Medical Microbiology* 44, 135-40.
- 10 Leino L, Sorvajarvi K, Katajisto J, Laine M, Lilius E, Pelliniemi T, Rajamaki A, Silvonien P, Nikoskelainen J (1997) Febrile infection changes the expression of IgG Fc receptors and complement receptors in human neutrophils in vivo. *Clin Exp Immunol* 107, 37-43.
- 11 Davis BH and Bigelow NC (2005) Comparison of neutrophil CD64 expression, manual myeloid immaturity counts, and automated hematology analyzer flags as indicators of infection or sepsis. *Lab Hematol* 11:137 – 147.
- 12 US Department of Labor, Occupational Safety and Health Administration. 29 CFR Part 1910. 1030, Occupational Exposure to Bloodborne Pathogens; Final Rule. Federal Register 235:64175-82. 1991

Explanation of used symbols

	Consult instructions for use
	Catalogue number
	Sufficient for
	Caution, consult accompanying document
	Keep away from (sun)light
	Biological risks
	Temperature limitation (°C)
	Analyte Specific Reagent
	Batch code
	Use by yyyy-mm-dd
	Manufacturer

	Conjugates		Ex -max (nm)	Em -max (nm)
P	PURE	Unconjugated antibody	-	-
F	FITC	Fluorescein Isothiocyanate	488	519
R	R-PE	R-Phycoerythrin	488, 532	578
C	CyQ	Tandem conjugate of R-PE-and Cy5.18	488, 532	667
A	APC	Allophycocyanin	595, 633, 635, 647	660
D	Dy-410	Violet Dye 410	405	460
PC	PerCP	Peridinin-chlorophyll-protein	488, 532	678
PCC	PerCP-Cy5.5	Tandem conjugate of PerCP-and Cy5.5	488, 532	695



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