

Anti-CD64 Antibody [A7E4]

HA601003



Product Type:	Mouse monoclonal IgG1, primary antibodies
Species reactivity:	Human
Applications:	WB
Molecular Wt:	Predicted band size: 43 kDa
Clone number:	A7E4

Description: CD64 (Cluster of Differentiation 64) is a type of integral membrane glycoprotein known as an Fc receptor that binds monomeric IgG-type antibodies with high affinity. It is more commonly known as Fc-gamma receptor 1 (FcγRI). After binding IgG, CD64 interacts with an accessory chain known as the common γ chain (γ chain), which possesses an ITAM motif that is necessary for triggering cellular activation. Structurally CD64 is composed of a signal peptide that allows its transport to the surface of a cell, three extracellular immunoglobulin domains of the C2-type that it uses to bind antibody, a hydrophobic transmembrane domain, and a short cytoplasmic tail. CD64 is constitutively found on only macrophages and monocytes, but treatment of polymorphonuclear leukocytes with cytokines like IFNγ and G-CSF can induce CD64 expression on these cells. There are three distinct (but highly similar) genes in humans for CD64 called FcγRIA (CD64A), FcγRIB (CD64B), and FcγRIC (CD64C) that are located on chromosome 1. These three genes produce six different mRNA transcripts; two from CD64A, three from CD64B, and one from CD64C; by alternate splicing of the genes.

Immunogen: Recombinant protein within Human CD64 aa 1-200 / 374.

Positive control: THP-1 cell lysates, U937 cell lysates.

Subcellular location: Cell membrane.

Database links: SwissProt: P12314 Human

Recommended Dilutions:
WB 1:500-1:2,000

Storage Buffer: PBS (pH7.4), 0.05% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

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Applications: WB=Western blot IP=Immunoprecipitation IHC=Immunohistochemistry IF=Immunofluorescence FC=Flow cytometry

Fig1: Western blot analysis of CD64 on THP-1 cell lysates with Mouse anti-CD64 antibody (HA601003) at 1/2,000 dilution.

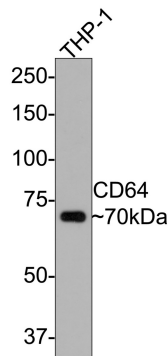
Lysates/proteins at 10 µg/Lane.

Predicted band size: 43 kDa

Observed band size: 70 kDa

Exposure time: 1 minute;

8% SDS-PAGE gel.



Proteins were transferred to a PVDF membrane and blocked with 5% NFDN/TBST for 1 hour at room temperature. The primary antibody (HA601003) at 1/2,000 dilution was used in 5% NFDN/TBST at room temperature for 2 hours. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1:100,000 dilution was used for 1 hour at room temperature.

Fig2: Western blot analysis of CD64 on U937 cell lysates with Mouse anti-CD64 antibody (HA601003) at 1/500 dilution.

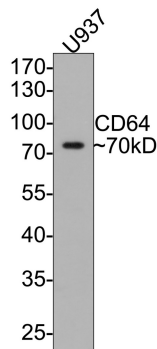
Lysates/proteins at 10 µg/Lane.

Predicted band size: 43 kDa

Observed band size: 70 kDa

Exposure time: 1 minute;

10% SDS-PAGE gel.



Proteins were transferred to a PVDF membrane and blocked with 5% NFDN/TBST for 1 hour at room temperature. The primary antibody (HA601003) at 1/500 dilution was used in 5% NFDN/TBST at room temperature for 2 hours. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1:100,000 dilution was used for 1 hour at room temperature.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Patnaik R. et. al. Neutrophil CD64 a Diagnostic and Prognostic Marker of Sepsis in Adult Critically Ill Patients: A Brief Review. Indian J Crit Care Med. 2020 Dec
2. Walcheck B. et. al. iNK-CD64/16A cells: a promising approach for ADCC? Expert Opin Biol Ther. 2019 Dec

