

**Mouse Anti-CD38 [AT1]: MC0592, MC0592RTU7**

**Intended Use:** For Research Use Only

**Description:** CD38, also called ADP-ribosyl cyclase, is a druggable ectoenzyme that uses nicotinamide adenine dinucleotide (NAD) as a substrate to generate second messengers. In particular, it synthesizes cyclic ADP-ribose, a second messenger for glucose-induced insulin secretion. CD38 also has cADPR hydrolase activity. It is preferentially expressed at both early and late stages of B- and T-cell maturation. In normal lymph nodes and tonsils, the antigen is detected mainly on B cells in germinal centers and plasma cells. An antibody to CD38 is helpful in the identification of plasma cells and tumors with plasmablastic differentiation. A prognostic value of CD38 in B-cell chronic lymphocytic leukemia (CLL) has been reported. Expression of CD38 is linked to unmutated IgVH genes and a worse prognosis. CD38 is involved in the generation of adenosine, which is implicated in tumor immune evasion. CD38 mRNA expression in metastatic castration-resistant prostate cancer (mCRPC) was most significantly associated with upregulated immune signaling pathways, and with interleukin (IL)-12, IL-23, and IL-2.

**Specifications:**

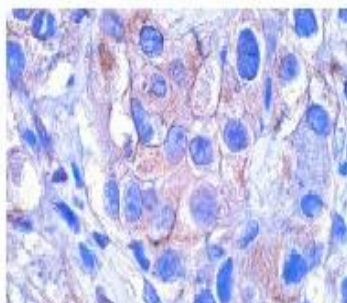
Clone: AT1  
 Source: Mouse  
 Isotype: IgG1k  
 Reactivity: Human  
 Immunogen: Human T cell line CCRF-CEM  
 Localization: Membrane  
 Formulation: Antibody in PBS pH7.4, containing BSA and  $\leq 0.09\%$  sodium azide (NaN<sub>3</sub>)  
 Storage: Store at 2°- 8°C  
 Applications: IHC, Flow Cyt., IF, IP, WB  
 Package:

Description	Catalog No.	Size
CD38 Concentrated	MC0592	1 ml
CD38 Prediluted	MC0592RTU7	7 ml

**IHC Procedure\*:**

Positive Control Tissue: Tonsil, lymphoma  
 Concentrated Dilution: 50-200  
 Pretreatment: Tris EDTA pH9.0, 15 minutes Pressure Cooker or 30-60 minutes water bath at 95°-99°C  
 Incubation Time and Temp: 30-60 minutes @ RT  
 Detection: Refer to the detection system manual

\* Result should be confirmed by an established diagnostic procedure.



FFPE human lymphoma stained with anti-CD38 using DAB

**References:**

1. All-trans-retinoic acid and CD38 ligation differentially regulate CD1d expression and  $\alpha$ -galactosylceramide-induced immune responses. Chen Q, Ross AC. Immunobiology. Jan;220(1):32-41, 2015.
2. Two genetic variants of CD38 in subjects with autism spectrum disorder and controls. Munesue T, et al. Neurosci Res. Jun;67(2):181-91, 2010.

Doc. 100-MC0592  
Rev. A