

DESCRIPTION	
Species Reactivity	Human
Specificity	Detects human CD38.
Source	Monoclonal Mouse IgG _{2A} Clone # 240742
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	NS0 mouse myeloma cell line transfected with human CD38 Met1-Ile300 Accession # P28907
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

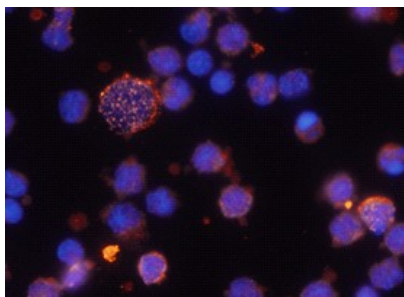
APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

	Recommended Concentration	Sample
Flow Cytometry	2.5 µg/10 ⁶ cells	Human whole blood lymphocytes
Immunocytochemistry	8-25 µg/mL	See Below
Immunoprecipitation	25 µg/mL	Conditioned cell culture medium spiked with Recombinant Human CD38 (Catalog # 2404-AC), see our available Western blot detection antibodies
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

DATA

Immunocytochemistry



CD38 in Human PBMCs. CD38 was detected in immersion fixed human peripheral blood mononuclear cells (PBMCs) using 10 µg/mL Mouse Anti-Human CD38 Monoclonal Antibody (Catalog # MAB2404) for 3 hours at room temperature. Cells were stained with the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). View our protocol for [Fluorescent ICC Staining of Non-adherent Cells](#).

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

CD38, also known as ADP-ribosyl cyclase, is a Type II integral membrane protein. The enzyme is able to transform NAD(P)⁺ into three different products with calcium mobilizing ability, cyclic ADP-ribose, NAADP⁺, and ADP-ribose (1). CD38 is expressed in B and T lymphocytes, osteoclasts, and in cardiac, pancreatic, liver and kidney cells (2, 3). Through its production of cyclic ADP-ribose, CD38 modulates calcium-mediated signal transduction in many types of cells, including neutrophils and pancreatic β cells (4, 5).

References:

1. Schuber, F. and F.E. Lund (2004) *Curr. Mol. Med.* **4**:249.
2. Jackson, D.G. and J.I. Bell (1990) *J. Immunol.* **144**:2811.
3. Sun, L. *et al.* (1999) *J. Cell Biol.* **146**:1161.
4. Partida-Sanchez, S. *et al.* (2001) *Nature Med.* **7**:1209.
5. Kato, I. *et al.* (1995) *J. Biol. Chem.* **270**:30045.