

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse CD38 in direct ELISAs and Western blots. In direct ELISAs and Western blots, approximately 20% cross-reactivity with recombinant human CD38 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse CD38 Leu45-Thr304 Accession # EDL37596
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
Western Blot	0.5 µg/mL	See Below
Flow Cytometry	0.25 µg/10 ⁶ cells	Mouse splenocytes
Simple Western	10 µg/mL	See Below
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	


DATA

Western Blot

Detection of Mouse CD38 by Western Blot. Western blot shows lysates of mouse spleen tissue, mouse colon tissue, and mouse splenocytes. PVDF membrane was probed with 0.5 µg/mL of Sheep Anti-Mouse CD38 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF4947) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for CD38 at approximately 45 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Simple Western

Detection of Mouse CD38 by Simple Western™. Simple Western lane view shows lysates of mouse spleen tissue, loaded at 0.2 mg/mL. A specific band was detected for CD38 at approximately 64 kDa (as indicated) using 10 µg/mL of Sheep Anti-Mouse CD38 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF4947) followed by 1:50 dilution of HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.



PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 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 and cyclic ADP-ribose hydrolase, 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). CD38 has been shown to regulate oxytocin secretion, and may be involved in the development of complex social behaviors in mammals (6).

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.
6. Jin, D. *et al.* (2007) *Nature* **446**:41.