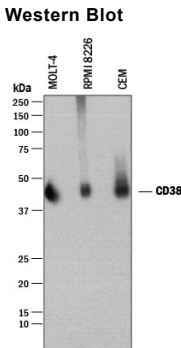
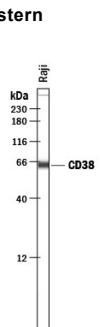



DESCRIPTION	
Species Reactivity	Human
Specificity	Detects human CD38 in direct ELISAs and Western blots. In Western blots, approximately 10% cross-reactivity with recombinant mouse CD38 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human CD38 Val43-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
Western Blot	0.1 µg/mL	See Below
Simple Western	10 µg/mL	See Below

DATA	
<p>Western Blot</p>  <p>Detection of Human CD38 by Western Blot. Western blot shows lysates of MOLT-4 human acute lymphoblastic leukemia cell line, RPMI 8226 human multiple myeloma cell line, and CEM human T-lymphoblastoid cell line. PVDF membrane was probed with 0.1 µg/mL of Sheep Anti-Human CD38 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2404) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific and diffuse band was detected for CD38 at approximately 45 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.</p>	<p>Simple Western</p>  <p>Detection of Human CD38 by Simple Western™. Simple Western lane view shows lysates of Raji human Burkitt's lymphoma cell line, 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-Human CD38 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2404). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.</p> 

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, 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:

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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.