



## PRODUCT SPECIFICATION

Recombinant anti-human CD38 nanobody 1053.

Catalogue number: sdAb-CD38-Nb1053

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### Background

CD38 is a type II transmembrane multifunctional glycoprotein and enzyme (2'-Phospho-ADP-Ribosyl Cyclase/2'-Phospho-Cyclic-ADP-Ribose Transferase). CD38 catalyzes synthesis of ADP ribose and cyclic ADP ribose from the metabolic co-enzyme NAD<sup>+</sup>. It is thought to be one of the major regulators of NAD<sup>+</sup> levels. CD38 displays both extracellular and intracellular functions and has been put forward as a therapeutic target for multiple myeloma. It mobilizes calcium from several intracellular stores (endoplasmic reticulum, endo-lysosomal stores). Its expression level on activated T cells is an indicator of AIDS progression but it is also used as a prognostic marker for patients with chronic lymphocytic leukemia.

Applications: Suitable for immunoprecipitation, ELISA, FACS. This product is for R&D use only, not for drug, diagnostic, therapeutic, household, or other uses.

Source and properties: Raised in llama using the C-terminal domain of human CD38 (residues 45–300) as antigen.

Availability: CD38 Nb1053 comes with a COOH-terminal HA epitope tag. Available in 100 µg, 500 µg, 1000 µg quantities. For bulk amounts, please inquire.

Expression host: VHH single domain antibody purified from *E. coli*.

Storage buffer: 20 mM Tris-HCl pH 8.0, 150 mM NaCl, 1mM DTT, 60 % glycerol. Store at -20°C. The sample will not freeze. Maintain sample in cold environment during transport to increase longevity.

Stability: Store at -20°C upon arrival. For long term storage, aliquot and store at -80°C. Avoid repeated freeze/thaw cycles.

### Sources:

\*Li, T., S. Qi, M. Unger, Y.N. Hou, Q.W. Deng, J. Liu, C.M.C. Lam, X.W. Wang, D. Xin, P. Zhang, F. Koch-Nolte, Q. Hao, H. Zhang, H.C. Lee, and Y.J. Zhao. 2016. Immuno-targeting the multifunctional CD38 using nanobody. *Scientific Reports*. 6:27055.

\*Protein data bank (PDB) <https://www.rcsb.org/>

\*Wikipedia <https://en.wikipedia.org/wiki/CD38>

\*Genecards: <https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD38>

### Citations:

Li, T., S. Qi, M. Unger, Y.N. Hou, Q.W. Deng, J. Liu, C.M.C. Lam, X.W. Wang, D. Xin, P. Zhang, F. Koch-Nolte, Q. Hao, H. Zhang, H.C. Lee, and Y.J. Zhao. 2016. Immuno-targeting the multifunctional CD38 using nanobody. *Scientific Reports*. 6:27055.