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| Product Type: | Recombinant Chimeric Antibody, primary antibodies |
| Species reactivity: | 0 |
| Applications: | |
| Molecular Wt: | Predicted band size: 34 kDa |
| Clone number: | PD01-49 |

Description: CD38 (cluster of differentiation 38), also known as cyclic ADP ribose hydrolase is a glycoprotein found on the surface of many immune cells (white blood cells), including CD4+, CD8+, B lymphocytes and natural killer cells. CD38 also functions in cell adhesion, signal transduction and calcium signaling. CD38 can function either as a receptor or as an enzyme. [13] As a receptor, CD38 can attach to CD31 on the surface of T cells, thereby activating those cells to produce a variety of cytokines. CD38 is a multifunctional enzyme that catalyzes the synthesis of ADP ribose (ADPR) (97%) and cyclic ADP-ribose (cADPR) (3%) from NAD⁺. CD38 is thought to be a major regulator of NAD⁺ levels, its NADase activity is much higher than its function as an ADP-ribosyl-cyclase: for every 100 molecules of NAD⁺ converted to ADP ribose it generates one molecule of cADPR. When nicotinic acid is present under acidic conditions, CD38 can hydrolyze nicotinamide adenine dinucleotide phosphate (NADP⁺) to NAADP. These reaction products are essential for the regulation of intracellular Ca²⁺. CD38 occurs not only as an ectoenzyme on cell outer surfaces, but also occurs on the inner surface of cell membranes, facing the cytosol performing the same enzymatic functions. CD38 is believed to control or influence neurotransmitter release in the brain by producing cADPR. CD38 within the brain enables release of the affiliative neuropeptide oxytocin. Like CD38, CD157 is a member of the ADP-ribosyl cyclase family of enzymes that catalyze the formation of cADPR from NAD⁺, although CD157 is a much weaker catalyst than CD38. The SARM1 enzyme also catalyzes the formation of cADPR from NAD⁺, but SARM1 elevates cADPR much more efficiently than CD38.

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| Immunogen: | Synthetic peptide within human CD38 aa 250-300. |
| Positive control: | Daudi cell lysates, human tonsil tissue, A549, THP-1, human appendix tissue, human colon cancer tissue, human prostate tissue, human thymus tissue. |
| Subcellular location: | Membrane. |
| Database links: | SwissProt: P28907 Human |
| Storage Buffer: | PBS (pH7.4). |
| Storage Instruction: | Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles. |
| Purity: | Protein A affinity purified. |

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No Images

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Guerreiro S et al. CD38 in Neurodegeneration and Neuroinflammation. Cells. 2020 Feb
2. Piedra-Quintero ZL et al. CD38: An Immunomodulatory Molecule in Inflammation and Autoimmunity. Front Immunol. 2020 Nov

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Applications:WB=Western blot IHC-P=Immunohistochemistry (paraffin) IF-Cell=Immunofluorescence (Cell) IF-Tissue=Immunofluorescence (Tissue) FC=Flow cytometry IP=Immunoprecipitation