



## CELL LAB Rat Anti-Mouse CD38

<u>Cat. No.</u>	<u>Form</u>	<u>Quantity</u>
732125	Purified (UNLB) Antibody	0.5 mg
732126	Fluorescein (FITC) Conjugate	0.5 mg
732127	Biotin (BIOT) Conjugate	0.5 mg
732128	Phycoerythrin (PE) Conjugate	0.1 mg
733298	Phycoerythrin (PE) Conjugate	0.2 mg
733299	Spectral Red™ (SPRD) Conjugate	0.1 mg

### For Laboratory Use Only

#### DESCRIPTION

**Clone:** NIMR-5  
**Isotype:** Rat IgG2a $\kappa$   
**Specificity:** CD38, Mr 42-46 kDa

Murine CD38, a type II transmembrane glycoprotein, is a bifunctional ectoenzyme capable of catabolizing nicotinamide adenine dinucleotide (NAD<sup>+</sup>) to cyclic ADP-ribose (cADPR), and then hydrolyzing cADPR to adenosine diphosphoribose (ADPR).<sup>1-3</sup> It is expressed at high levels on the surface of peripheral B-lineage cells, and at low density on germinal center B cells from unimmunized mice.<sup>4</sup> It has also been reported to be expressed at moderate levels on NK cells, a proportion of peripheral T cells, and a subpopulation of thymocytes which are mostly TCR $\alpha\beta$ <sup>+</sup>, CD4<sup>-</sup>, CD8<sup>-</sup>.<sup>5,6</sup> Murine CD38 is also expressed by all Mac-1<sup>+</sup> macrophages in the peritoneal cavities of unimmunized mice, but not by unstimulated bone-marrow-derived macrophages.<sup>4</sup> Monoclonal antibodies to CD38 have been shown to induce B- and T-cell proliferation, protect B cells from apoptosis, and inhibit B lymphopoiesis.<sup>2,5,7</sup>

#### APPLICATIONS

- Flow cytometry<sup>1-7</sup>
- Immunoprecipitation<sup>1</sup>
- Immunohistochemistry (acetone-fixed, frozen tissue sections)
- Induction of B lymphocyte proliferation<sup>3-7</sup>

#### CHARACTERIZATION

To ensure lot-to-lot consistency, each batch of product is tested to conform with characteristics of a standard reference reagent using immunofluorescence staining and flow cytometry.

#### WORKING DILUTIONS

**Flow Cytometry:**

FITC conjugate	≤1 $\mu\text{g}/10^6$ cells
BIOT conjugate	≤1 $\mu\text{g}/10^6$ cells
PE conjugate	≤0.2 $\mu\text{g}/10^6$ cells
SPRD conjugate	≤0.2 $\mu\text{g}/10^6$ cells

**Other Applications:** Since applications vary, determine the optimum working dilution of the product that is appropriate for your specific needs.

## HANDLING AND STORAGE

- The purified (UNLB) antibody is supplied as 0.5 mg of purified immunoglobulin in 1.0 mL of 100 mM borate buffered saline, pH 8.0. No preservatives or amine-containing buffer salts added.
- The fluorescein (FITC) conjugate is supplied as 0.5 mg in 1.0 mL of PBS/NaN<sub>3</sub>.
- The biotin (BIOT) conjugate is supplied as 0.5 mg in 1.0 mL of PBS/NaN<sub>3</sub>.
- The phycoerythrin (PE) conjugates are supplied as 0.1 mg in 1.0 mL or 0.2 mg in 2.0 mL of PBS/NaN<sub>3</sub> and a stabilizing agent.
- The Spectral Red (SPRD) conjugate is supplied as 0.1 mg in 1.0 mL of PBS/NaN<sub>3</sub> and a stabilizing agent.
- Protect fluorochrome-conjugated forms from light. Do not freeze.
- Reagent is stable until the expiration date on the vial when stored at 2-8°C.

## STATEMENT OF WARNINGS

1. Specimens, samples and all material coming in contact with them should be handled as if capable of transmitting infection and disposed of with proper precautions.
2. Never pipet by mouth and avoid contact of samples with skin and mucous membranes.
3. Do not use reagent beyond the expiration date on the vial label.
4. Minimize exposure of reagent to light during storage or incubation.
5. Avoid microbial contamination of reagent or erroneous results may occur.
6. Use Good Laboratory Practice (GLP) when handling this reagent.
7. Harmful if swallowed.
8. After contact with skin, wash immediately with plenty of water.
9. Contains sodium azide. Sodium azide under acidic conditions yields hydrazoic acid, an extremely toxic compound. Azide compounds should be flushed with running water while being discarded. These precautions are recommended to avoid deposits in metal piping in which explosive conditions can develop. If skin or eye contact occurs, immediately wash excessively with water.

## TRADEMARKS

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## REFERENCES

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