

Monoclonal Antibody CD154 (CD40L)

PN IM1842 – Purified – Freeze-dried – 0.2 mg – Clone TRAP1

For Research Use Only. Not for use in diagnostic procedures.

SPECIFICITY

The ligand for CD40 (CD154 or CD40L), also called TRAP (TNF Related Activation Protein), is a 33 kDa membrane glycoprotein, belonging to the TNF / NGF ligand family (1, 2). Like TNF, it potentially exists both in a membrane-anchored and a soluble form (1). CD154 is undetectable on freshly isolated peripheral blood mononuclear cells (3, 4). It is predominantly expressed by activated CD4⁺ T cells, although a proportion of CD8⁺ cells also expresses the protein (4). CD154 induces B cell proliferation and immunoglobulin secretion (4, 5). CD40 / CD154 system is predicted to function in the process of B cell selection in the germinal centre (6). CD154 is also expressed on activated platelets and triggers an inflammatory reaction of endothelial cells (7).

The TRAP-1 monoclonal antibody was assigned to the CD154 cluster of differentiation at the 6th International Workshop on Human Leucocyte Differentiation Antigens in Kobe, Japan, in 1996 (2).

REAGENT

Monoclonal Antibody CD154
PN IM1842 – Purified – Freeze-dried

CLONE TRAP1

ISOTYPE IgG1

IMMUNOGEN Mouse myeloma line transfected with a TRAP cDNA fragment

HYBRIDOMA P3X63Ag.8653 x Balb/c spleen cells

SPECIES Mouse

SOURCE ascites fluid

PURIFICATION Ion exchange or affinity chromatography

REAGENT CONTENTS

This reagent is provided in freeze-dried form from phosphate-buffered saline (PBS: 0.008 M sodium phosphate, 0.15 M sodium chloride, pH 7.2), with 1 mg/mL bovine serum albumin (BSA).

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. Avoid microbial contamination of reagent or erroneous results may occur.
5. Use Good Laboratory Practices (GLP) when handling this reagent.

STORAGE CONDITIONS AND STABILITY

This reagent is stable up to the expiration date on the vial label when stored at 2 – 8°C. The reconstituted form may be stored at -20°C until the expiration date. Aliquotting is suggested to avoid multiple freeze-thaw cycles. The addition of sodium azide at 0.1% (w/v) is recommended for storage of the reconstituted form for up to one month at 2-8°C. Minimize exposure to light and warmth.

REAGENT PREPARATION

Reconstitute with 1 mL of distilled water. No preservative has been added.

PROCEDURE

Flow Cytometry: Suggested working dilution: 1:20. Use 10 µL of that dilution to label 5 x 10⁵ cells.

For other applications it is recommended that the user titrates the antibody for use in her / his own system using appropriate negative / positive controls.

SELECTED RESEARCH REFERENCES

1. Graf, D., Korthäuer, U., Mages, H.W., Senger, G., Kroczeck, R.A., "Cloning of TRAP, a ligand for CD40 on human T cells", 1992, Eur. J. Immunol., 22, 3191-3194.
2. Fanslow, W.C., Rousseau, A-M.C., Lofton, T.E., Klinke, R., Ulrich, D.T., Armitage, R.J., "CD154 (CD40 ligand) Workshop Panel report", 1997, Leucocyte Typing VI, White Cell Differentiation Antigens. Kishimoto, T., et al., Eds., Garland Publishing, Inc., 101-103.
3. Hermann, P., Blanchard, D., de Saint-Vis, B., Fossiez, F., Gaillard, C., Vanbervliet, B., Brière, F., Banchereau, J., Galizzi, J.P., "Expression of a 32 kDa ligand for the CD40 antigen on activated human T lymphocytes", 1993, Eur. J. Immunol., 23, 961-964.
4. Lane, P., Trauneker, A., Hubele, S., Inui, S., Lanzavecchia, A., Gray, D., "Activated human T cells express a ligand for the human B cell-associated antigen CD40 which participates in T cell-dependent activation of B lymphocytes", 1992, Eur. J. Immunol., 22, 2573-2578.



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5. Brugnoli, D., Airo, P., Graf, D., Marconi, M., Molinari, C., Braga, D., Malacarne, F., Soresina, A., Ugazio, A.G., Cattaneo, R., Kroczek, R.A., Notarangelo, L.D., "Ontogeny of CD40 expression by activated peripheral blood lymphocytes in humans", 1996, Immunol. Letters, 49, 27-30.
6. Lagresle, C., Bella, C., Daniel, P.T., Krammer, P.H., Defrance, T., "Regulation of germinal center B cell differentiation", 1995, J. Immunol., 154, 5746-5756.
7. Henn, V., Slupsky, J.R., Gräfes, M., Anagnostopoulos, I., Förster, R., Müller-Bergahaus, G., Kroczek, R.A., "CD40 ligand on activated platelets triggers an inflammatory reaction of endothelial cells", 1998, Nature, 391, 591-594.

OTHER FORMS AVAILABLE

CD154-PE (IM2216)

For additional information in the USA, call 800-526-7694.

Outside the USA, contact your local Beckman Coulter representative.
www.beckmancoulter.com

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