## BACKGROUND

The $0 \times 40$ ligand, $0 \times 40 \mathrm{~L}$ (also designated gp34), is a type II membrane protein, due to the absence of a signal peptide. $0 \times 40 \mathrm{~L}$, a member of the tumor necrosis factor (TNF) superfamily, is a costimulatory molecule involved in dendritic cell:T cell interactions, T cell homing and B cell activation. Engagement of $0 \times 40 \mathrm{~L}$ with its receptor, $0 \times 40$, delivers a strong costimulatory signal to effector T cells. $0 \times 40 \mathrm{~L}$ is found preferentially on activated B cells and its receptor, $0 \times 40$, is a member of the tumor necrosis factor receptor (TNFR) family that is expressed on activated T cells. Ox40L plays a critical role in antigen-specific T cell responses in vivo and in both the priming and effector phases of T cell activation when expressed on antigen-presenting cells (APCs).

## REFERENCES

1. Hahne, M., Kataoka, T., Schroter, M., Hofman, K., Irmler, M., Bodmer, J.L., Schneider, P., Bornand, T., Holler, N., French, L.E., Sordat, B., Rimoldi, D. and Tschopp, J. 1998. APRIL, a new ligand of the tumor necrosis factor family, stimulates tumor cell growth. J. Exp. Med. 188: 1185-1190.
2. Chen, A.I., McAdam, A.J., Buhlmann, J.E., Scott, S., Lupher, M.L., Jr., Greenfield, E.A., Baum, P.R., Fanslow, W.C., Calderhead, D.M., Freeman, G.J. and Sharpe, A.H. 1999. Ox40-ligand has a critical costimulatory role in dendritic cell:T cell interactions. Immunity 11: 689-698.
3. Matsumura, Y., Hori, T., Kawamata, S., Imura, A. and Uchiyama, T. 1999. Intracellular signaling of gp34, the $0 \times 40$ ligand: induction of c -Jun and c-Fos mRNA expression through gp34 upon binding of its receptor, $0 \times 40$. J. Immunol. 163: 3007-3011.
4. Weinberg, A.D., Rivera, M.M., Prell, R., Morris, A., Ramstad, T., Vetto, J.T., Urba, W.J., Alvord, G., Bunce, C. and Shields, J. 2000. Engagement of the $0 \times 40$ receptor in vivo enhances antitumor immunity. J. Immunol. 164: 2160-2169.
5. Morimoto, S., Kanno, Y., Tanaka, Y., Tokano, Y., Hashimoto, H., Jacquot, S., Morimoto, C., Schlossman, S.F., Yagita, H., Okumura, K. and Kobata, T. 2000. CD134L engagement enhances human B cell Ig production: CD154/CD40, CD70/CD27 and CD134/CD134L interactions coordinately regulate T celldependent B cell responses. J. Immunol. 164: 4097-4104.
6. Murata, K., Ishii, N., Takano, H., Miura, S., Ndhlovu, L.C., Nose, M., Noda, T. and Sugamura, K. 2000. Impairment of antigen-presenting cell function in mice lacking expression of Ox40 ligand. J. Exp. Med. 191: 365-374.
7. Malmstrom, V., Shipton, D., Singh, B., Al-Shamkhani, A., Puklavec, M.J., Barclay, A.N. and Powrie, F. 2001. CD134L expression on dendritic cells in the mesenteric lymph nodes drives colitis in T cell-restored SCID mice. J. Immunol. 166: 6972-6981.

## CHROMOSOMAL LOCATION

Genetic locus: Tnfff4 (mouse) mapping to 1 H 2.1 .

## SOURCE

$0 \times 40 \mathrm{~L}$ (RM134L) is a rat monoclonal antibody raised against $0 \times 40$ of mouse origin.

## PRODUCT

Each vial contains $100 \mu \mathrm{~g} \operatorname{lgG}_{2 \mathrm{~b}}$ in 1.0 ml of PBS with $<0.1 \%$ sodium azide and $0.1 \%$ gelatin.

## APPLICATIONS

$0 \times 40 \mathrm{~L}(\mathrm{RM} 134 \mathrm{~L})$ is recommended for detection of $0 \times 40 \mathrm{~L}$ of mouse origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry ( $1 \mu \mathrm{~g}$ per $1 \times 10^{6}$ cells).
Suitable for use as control antibody for 0x40L siRNA (m): sc-42825, 0x40L shRNA Plasmid (m): sc-42825-SH and 0x4OL shRNA (m) Lentiviral Particles: sc-42825-V.

Molecular Weight of 0x40L: 22 kDa .

## STORAGE

Store at $4^{\circ} \mathrm{C},{ }^{* *}$ DO NOT FREEZE ${ }^{* *}$. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

