

# PRODUCT INFORMATION

## CD40 Ligand Chimeric Monoclonal Antibody (Clone IDEC-131 (Toralizumab)) Item No. 37156

### Overview and Properties

<b>Contents:</b>	This vial contains 200 µg of protein A-affinity purified monoclonal antibody.
<b>Synonyms:</b>	CD154, CD40L, T-B Cell-activating Molecule, T Cell Antigen Gp39, TNF Ligand Superfamily Member 5, TNF-related Activation Protein
<b>Immunogen:</b>	Recombinant human CD40L
<b>Cross Reactivity:</b>	(+) CD40L
<b>Species Reactivity:</b>	(+) Human
<b>Uniprot No.:</b>	P29965
<b>Form:</b>	Liquid
<b>Storage:</b>	-20°C (as supplied)
<b>Stability:</b>	≥1 year
<b>Storage Buffer:</b>	PBS with 0.02% ProClin™ 300
<b>Clone:</b>	IDEC-131 (Toralizumab)
<b>Host:</b>	Chimeric Monoclonal Antibody
<b>Isotype:</b>	IgG1k
<b>Application:</b>	Immunofluorescence (IF); block; the optimal working concentration/dilution should be determined empirically.

### Description

CD40 ligand (CD40L) is a type II transmembrane protein and member of the TNF superfamily encoded by *CD40LG* in humans.<sup>1</sup> It is expressed primarily by activated T cells, as well as activated B cells and platelets and, under inflammatory conditions, can be induced in natural killer (NK) cells, mast cells, basophils, and monocytes. CD40L trimerizes to engage its receptor, CD40, on various cells, including B cells, dendritic cells, monocytes, platelets, macrophages, endothelial cells, and myoblasts, to induce cell type-specific signaling and activities. Soluble CD40L (sCD40L) is produced by proteolytic cleavage of CD40L at the cell surface and is found in the circulation.<sup>2,3</sup> sCD40L retains its ability to trimerize and bind to CD40, indicating CD40L can act as a cytokine.<sup>3</sup> CD40L stimulates the proliferation of, and increases IgE secretion in, isolated human tonsil B cells.<sup>4</sup> Immune complexes targeting CD40L induce thrombocytopenia and thrombosis in transgenic mice expressing the gene encoding the human IgG receptor (*FCGR2A*).<sup>5</sup> Mutations in *CD40LG* are associated with X-linked immunodeficiency with hyper-IgM (HIGM1), a disorder characterized by an immunoglobulin isotype switch defect, increased serum IgM levels, ineffective T cell-B cell cooperation, and recurrent bacterial infections.<sup>6</sup> Cayman's CD40 Ligand Chimeric Monoclonal Antibody (Clone IDEC-131 (Toralizumab)) was produced recombinantly from the original gp39/CD40 antibody sequence and can be used for immunofluorescence (IF). The gp39/CD40 antibody was generated by immunizing mice with a soluble fusion protein of human gp39-CD8.<sup>7</sup>

### References

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2. van Kooten, C. and Banchereau, J. *J. Leukoc. Biol.* **67(1)**, 2-17 (2000).
3. Doublier, S., Zennaro, C., Musante, L., *et al. PLoS One* **12(11)**, e0188045 (2017).
4. Spriggs, M.K., Armitage, R.J., Strockbine, L., *et al. J. Exp. Med.* **176(6)**, 1543-1550 (1992).
5. Robles-Carrillo, L., Meyer, T., Hatfield, M., *et al. J. Immunol.* **185(3)**, 1577-1583 (2010).
6. Macchi, P., Villa, A., Strina, D., *et al. Am. J. Hum. Genet.* **56(4)**, 898-906 (1995).
7. Black, A., Hanna, N., Padlan, E.A., *et al. Humanized antibodies to human GP39, compositions containing thereof. Idex Pharmaceuticals Corporation. US006001358A* (1992).

WARNING  
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA  
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY  
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