Technical Data Sheet

RecombiMAb anti-human/monkey CD40L (CD154) (LALA-PG)

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Lot Specific Information

Lot Number: **Lot Specific***
Volume: **Lot Specific***
Concentration: **Lot Specific* (generally 4 to 11 mg/ml) ***
Total Protein: **Lot Specific***

*This information will be noted on the certificate of analysis that ships with this product.

Product Information

Catalog Number:	**CP249**
Clone:	**hu5C8-CP249**
Isotype:	Human IgG1, κ
Recommended Isotype Control(s):	RecombiMAb human IgG1 (LALA-PG) isotype control, anti-hen egg lysozyme
Recommended Dilution Buffer:	InVivoPure pH 7.0 Dilution Buffer
Immunogen:	Human CD40L
Reported Applications:	*in vivo* blocking of CD40/CD40L signaling*, *in vitro* organoids/organ on a chip *in vivo* functional assay* *in vitro* functional assay* Flow cytometry* *Reported for the hu5C8 human IgG1,k antibody (without LALA-PG Fc silencing mutation)
Formulation:	PBS, pH 7.0 Contains no stabilizers or preservatives
Endotoxin:	≤0.5EU/mg (≤0.0005EU/µg) Determined by LAL assay
Purity:	≥95% Determined by SDS-PAGE
Sterility:	0.2 µm filtration
Production:	Purified from mammalian cell supernatant in an animal-free facility
Purification:	Protein A
Aggregation:	<5% Determined by SEC
Molecular Weight:	150 kDa

Murine Pathogen Test Results

Mouse Norovirus: Negative, Mouse Parvovirus: Negative, Mouse Minute Virus: Negative, Mouse Hepatitis Virus: Negative, Reovirus Screen: Negative, Lymphocytic Choriomeningitis virus: Negative, Lactate Dehydrogenase-Elevating Virus: Negative, Mouse Rotavirus: Negative, Theiler's Murine Encephalomyelitis: Negative, Ectromelia/Mousepox Virus: Negative, Hantavirus: Negative, Polyoma Virus: Negative, Mouse Adenovirus: Negative, Sendai Virus: Negative, Mycoplasma Pulmonis: Negative, Pneumonia Virus of Mice: Negative, Mouse Cytomegalovirus: Negative, K Virus: Negative

Description

The hu5C8-CP249 antibody is a humanized recombinant anti-CD40L monoclonal antibody that retains the binding specificity of the original 5C8 and hu5C8 antibodies but contains a human IgG1 κ constant-region format with LALA-PG Fc silencing mutations. This antibody reacts with human and monkey CD40 ligand (CD40L), also known as CD154, T-cell antigen gp39, tumor necrosis factor superfamily member 5 (TNFSF5), T–B cell-activating molecule (T-BAM), and TNF-

related activation protein (TRAP). CD154 is a type II transmembrane glycoprotein, and it also exists in soluble forms. It is expressed primarily on activated CD4+ T lymphocytes, but depending on activation state and biological context, CD154 expression can be seen on platelets and other immune as well as non-hematopoietic cell populations. Through engagement of CD40 (TNFRSF5), CD154 supports antigen-presenting cell activation, T-cell-dependent B-cell responses, and antibody production. The CD40-CD40L signaling axis is also linked to pathways involving NF-kappa-B and MAPK8 activation. Antibodies that block the CD40L-CD40 interactions are useful tools for investigating T-cell help, B-cell activation, antibody responses, autoimmunity, and transplant rejection. The 5C8 antibody is a benchmark functional-blocking clone in preclinical research, but its therapeutic development encountered thrombotic complications linked to Fc-mediated platelet activation. Researchers have documented the use of aglycosylated hu5C8 (IgG1 N297G) and hu5C8-IgG2σ isotype variants of the 5C8 antibody as an approach to limit the Fc-mediated thrombotic complications. The hu5C8 antibody with LALA-PG Fc silencing mutations could potentially reduce confounding Fc-mediated effects in CD40L-CD40 signaling blockade studies by reducing FcγR- and complement-mediated effects. However, the extent of effector-function suppression or the related thrombotic reduction potential of hu5C8-CP249 antibody compared to other Fc-engineered formats must be established experimentally through appropriate in vitro and in vivo functional studies.

Storage

Store at the stock concentration at 4°C . **Do not freeze.**
It is not uncommon for a floccule or precipitate to appear during storage. The floccule is typically buffer salts precipitating out of solution or a small bit of protein aggregation. For information on how to remove floccules or precipitates see our FAQ's at https://bioxcell.com/faqs.

Protocol Information

Since applications vary, each investigator should use the application references as a guide to help estimate the appropriate dose or concentration. The dose or concentration can be further optimized experimentally in a dose response or titration experiment.

Application References

For a complete list of references, visit ?utm_source=cr9k1b#tab_references or scan the QR code below.

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