Technical Data Sheet

InVivoSIM anti-human IL-13 (Tralokinumab Biosimilar)

Attention: Use of this product constitutes an agreement to Bio X Cell's Terms and Conditions which are included with this product in print and can also be found at https://bioxcell.com/terms-and-conditions.

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:	**SIM0042**
Clone:	**Tralokinumab**
Isotype:	Human IgG4, λ
Recommended Isotype Control(s):	RecombiMAb human IgG4 (S228P) isotype control, anti-hen egg lysozyme
Recommended Dilution Buffer:	InVivoPure pH 7.0 Dilution Buffer
Mutations:	S228P
Immunogen:	Human IL-13
Reported Applications:	*in vivo* functional assays *in vitro* functional assays ELISA Flow cytometry
Formulation:	PBS, pH 7.0 Contains no stabilizers or preservatives
Endotoxin:	≤0.5EU/mg (≤0.0005EU/μg) Determined by LAL gel clotting assay
Purity:	≥95% Determined by SDS-PAGE
Sterility:	0.2 μm filtration
Production:	Purified from cell culture supernatant in an animal-free facility
Aggregation:	<5% Determined by SEC
RRID:	
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

This non-therapeutic biosimilar antibody uses the same variable regions as the therapeutic antibody Tralokinumab, making it ideal for research use. Tralokinumab is a fully humanized IgG4 monoclonal antibody that reacts with interleukin-13 (IL-13). IL-13 is an inflammatory cytokine that is involved in allergic inflammation and the immune response to parasite infection and is regarded as the primary driver of atopic dermatitis. IL-13 interacts with its high-affinity decoy receptors IL13R1 and IL13R2, and the interaction follows the extracellular IL-13's internalization and depletion. IL-13 binding to heterodimeric IL-4Rα and IL-13Rα1 activates downstream JAK/STAT pathways. IL-13 stimulates B-cell proliferation and the activation of eosinophils,

basophils, and mast cells. IL-13 regulates IL-33 through modulation of the production of interleukin-1 receptor-like 1 (IL1RL1), and IL-13 also regulates the synthesis of interferon-gamma (IFNγ) by synergizing with IL-2. IL-13 antagonizes the Th1-driven proinflammatory immune response and downregulates the synthesis of many proinflammatory cytokines, including IL1, IL6, IL10, IL12, and TNF-alpha. Tralokinumab neutralizes the activity of IL-13 by blocking its interaction with both the IL-13Rα1/IL-4Rα receptor complex and IL-13Rα2 receptors. Tralokinumab binds to IL-13 through an epitope that overlaps the IL-13Rα1 and ILRα2 receptors' binding sites, thereby preventing binding of IL-13. However, the IL-13 binding affinity to the IL-13Rα2 receptor is greater than that of Tralokinumab. Consequently, freed IL-13 remains able to connect to the IL-13Rα2 receptor. Experiments involving Tralokinumab have reported this antibody to functionally neutralize IL-13, i.e., IL-13Rα1:IL-4Rα interactions in vitro in a range of cell-based assays. In related in vivo experiments involving humanized mouse and cynomolgus monkey antigen challenge models, Tralokinumab was shown to inhibit airway hyperresponsiveness and bronchoalveolar lavage eosinophilia.

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

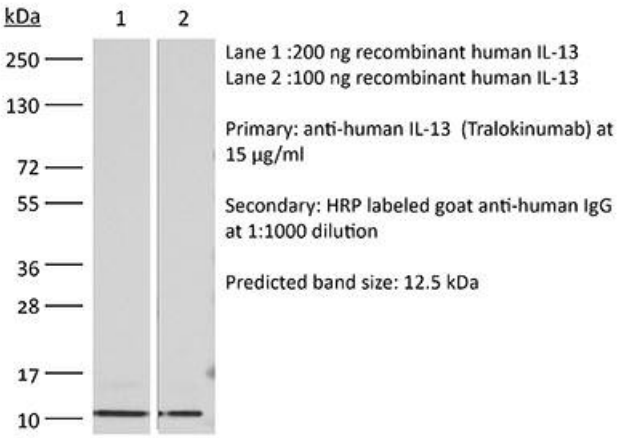
Since applications vary, each investigator should use the application references as a guide to help estimate the appropriate dose or concentration. The dose or concentration can be further optimized experimentally in a dose response or titration experiment.

Application References

For a complete list of references, visit https://bioxcell.com/sim0042?bxcs=9k1b3a#tab_references or scan the QR code below.

Binding Validation

Validation data shown below confirms that this clone binds to its target antigen. For lot specific binding validation data, e-mail technicalservice@bioxcell.com.



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