Technical Data Sheet

InVivoSIM anti-human IGF-1R (Teprotumumab 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:	**SIM0070**
Clone:	**Teprotumumab**
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
Mutations:	E356D/M358L
Immunogen:	Human IGF-1R
Reported Applications:	Functional assays Western blot 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
Purification:	Protein A
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 adopts the same variable regions as the therapeutic antibody Teprotumumab, making it ideal for research use. Teprotumumab is a fully human IgG1 monoclonal antibody that targets the insulin-like growth factor-1 receptor (IGF-1R), a tyrosine kinase receptor broadly expressed across numerous cell types and prominently upregulated in thyroid eye disease (TED). In orbital fibroblasts, IGF-1R forms functional complexes with the TSH receptor and drives pathogenic signaling cascades that lead to inflammation, tissue expansion, and remodeling in the orbit. IGF-1R is activated by IGF-1, a growth factor critical for regulating cell growth and tissue development both prenatally and postnatally.

IGF-1 promotes proliferation, migration, and differentiation in a wide variety of cell types and has broad metabolic functions, including regulation of glucose and lipid metabolism, modulation of steroid hormone signaling, and maintenance of cartilage and bone homeostasis. It also contributes to skeletal muscle regeneration and has been implicated in tumor progression and survival signaling in cancer. Teprotumumab binds the extracellular α-subunit of IGF-1R, blocking receptor activation and downstream signaling via the PI3K/AKT and MAPK/ERK pathways, thus dampening inflammatory responses and reducing hyaluronan production and tissue remodeling.

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/sim0070?bxcs=9k1b3a#tab_references or scan the QR code below.

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