Technical Data Sheet

InVivoSIM GLP-1 Receptor Agonist (Dulaglutide 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:	**SIM0077**
Clone:	**N/A**
Isotype:	Human IgG4, κ
Recommended Dilution Buffer:	InVivoPure pH 7.0 Dilution Buffer
Reported Applications:	*in vitro* functional assays *in vivo* functional assays
Formulation:	PBS, pH 7.0 Contains no stabilizers or preservatives
Endotoxin:	≤1EU/mg (≤0.001EU/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:	59.7

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 research-grade Dulaglutide biosimilar is a recombinant glucagon-like peptide-1 (GLP-1) analog useful for studies on metabolic disorders, especially type 2 diabetes mellitus (T2DM) and related conditions. Dulaglutide consists of amino acids 7–37 of GLP-1 covalently linked to the Fc fragment of human IgG4, wherein the Fc fragment protects the GLP-1 moiety from enzymatic degradation by dipeptidyl peptidase-4 (DPP-4), thereby extending its stability. As an incretin mimetic, dulaglutide acts as an agonist of the GLP-1 receptor (GLP-1R), a G protein–coupled receptor that plays a central role in regulating glucose homeostasis, insulin secretion, gastric emptying, and satiety. Binding of GLP-1 or its analogs to GLP-1R activates adenylyl cyclase, increasing intracellular cAMP levels and triggering insulin release in a glucose-dependent manner. Through this mechanism, dulaglutide enhances insulin secretion when glucose levels are elevated, reduces glucagon secretion, and delays gastric emptying, thereby lowering postprandial glucose levels. Extensive in vitro and in vivo studies have shown dulaglutide to stimulate glucose-dependent insulin secretion, suppress obesity, improve cardiovascular risk factors, and offer

protection against T2DM-associated conditions including sarcopenia, neuroinflammation, and kidney disease. Chronic treatment studies in animal models, including rats, transgenic mice, and monkeys, have been reported, with many mouse studies documenting the use of dulaglutide at 0.6 mg/kg for multi-week experiments.

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/sim0077?bxcs=9k1b3a#tab_references or scan the QR code below.

Bio X Cell, LLC
https://bioxcell.com
+1-866-787-3444
customerservice@bioxcell.com

Conditions: For research use only. Not for human use. Not for use in diagnostic or therapeutic procedures.
Not for resale.
Bio X Cell, Bio X Cell logo, and all other trademarks are the property of Bio X Cell, LLC © 2025 Bio X Cell, LLC