

Product Data Sheet

Product Name: TAVO101

Cat. No.: GC81496

Chemical Properties

Cas. No.

Formula M.Wt 145.74

Solubility Storage Store at -20°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure

Background

TAVO101 is a humanized anti- TSLP antibody with an EC 50 of 0.19 nM against hTSLP. TAVO101 inhibits STAT5 activation and CCL17 release. TAVO101 carries Fc region mutations that enhance its

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binding to FcRn while reducing its binding to FcγRI, FcγRIIIA and C1q, thereby attenuating effector functions. TAVO101 reduces the levels of inflammatory markers, cell infiltration and histopathological damage in preclinical models of asthma, psoriasis and atopic dermatitis. TAVO101 can be used for research related to asthma, psoriasis and atopic dermatitis [1] [2] [3].

In Vivo, TAVO101 (1-10 mg/kg; i.p.; single dose on Day -1 and Day 6) dose-dependently reduces key asthma-related biomarkers, inflammatory cell infiltration, and histopathological lesions in hTSLP/hTSLPR humanized mice, with 10 mg/kg yielding efficacy comparable to 3 mg/kg Tezepelumab [1]. TAVO101 (10 mg/kg; i.p.; single dose on Day 1, followed by 3 mg/kg; every other day for four additional doses) reduces clinical, cytokine, and histopathological markers of psoriasis in hTSLP/hTSLPR humanized mice, with superior efficacy in reducing skin scaling compared to Tezepelumab at the same dosing regimen[1]. TAVO101 (3-10 mg/kg; i.p.; twice weekly; 20 days) produces a 33%-35% improvement in skin lesion scores and significant reductions in ear thickness, serum IgE, and ear tissue IL-4 levels in oxazolone-induced atopic dermatitis in hTSLP/hTSLPR double knock-in mice[2].

In Vitro, TAVO101 (Serial 3-fold dilutions starting at 1 µg/mL; 2 hours at room temperature) potently binds human TSLP with an EC₅₀ of 29.06 ng/mL (0.19 nM) and exhibits no cross-reactivity to cynomolgus monkey or mouse TSLP[1]. TAVO101 (Serial 3-fold dilutions starting at 10 µg/mL; 2 hours at room temperature) blocks human TSLP binding to its receptor complex on transfected HEK293T cells with an IC₅₀ of 29.13 ng/mL (0.2 nM)[1]. TAVO101 binds human TSLP with high affinity, having an average K_D of 0.85 nM as measured by BLI[1]. TAVO101 (Serial 3-fold dilutions starting at 10 µg/mL; 24 hours) potently neutralizes TSLP-driven STAT5 reporter activation in transfected HEK293T cells with an IC₅₀ of 5.27 ng/mL (35.13 pM)[1]. TAVO101 (Serial 3-fold dilutions starting at 1 µg/mL; 2 days) neutralizes TSLP-driven proliferation of transfected BaF3 cells with an IC₅₀ of 6.6 ng/mL (44 pM)[1]. TAVO101 (1 µg/mL; 2 days) inhibits TSLP-driven CCL17 release from primary human CD1c+ dendritic cells isolated from healthy donor PBMC[1]. TAVO101 (3.03-33 µg/mL; 6 days) concentration-dependently inhibits TSLP-driven proliferation of activated primary human CD4+ T cells isolated from healthy donor PBMC[1]. TAVO101 (0.0001-100 nM; 2 h) potently binds to recombinant human TSLP (EC₅₀ ~0.13 nM) in ELISA binding assays, and does not bind to recombinant human IL-4Rα or IL-4Rα/IL-13Rα1 receptor complex[3]. TAVO101 (0.001-100

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nM; 2 h) inhibits human TSLP binding to its cell surface receptor complex on transfected Expi293F cells with an IC₅₀ of ~0.82 nM^[3]. TAVO101 (0.001-100 nM; 24 h) neutralizes human TSLP-driven STAT5 reporter gene expression in transfected HEK293T cells with an IC₅₀ of ~0.08 nM^[3]. TAVO101 (3 µg/mL; 6 days) significantly reduces Der p-stimulated IL-5 and CCL26 release from co-cultures of human PBMCs, MRC-5 cells, and A549 cells, with a less dramatic reduction in IL-5 levels than the bispecific antibody TAVO101 × IL4R-dup^[3]. TAVO101 (1-10000 ng/mL; 2 days) partially inhibits TSLP/IL-4-stimulated CCL17 release from activated human CD14⁺ monocytes by blocking the TSLP-mediated boost in production, reducing levels to the IL-4-alone baseline^[3].

References:

- [1]. Shi L, et al. A novel monoclonal antibody against human thymic stromal lymphopoietin for the treatment of TSLP-mediated diseases. *Front Immunol.* 2024;15:1442588. Published 2024 Dec 11.
- [2]. Han C, et al. Phase 1 Safety and Pharmacokinetics Study of TAVO101, an Anti-Human Thymic Stromal Lymphopoietin Antibody for the Treatment of Allergic Inflammatory Conditions. *J Clin Pharmacol.* Published online August 14, 2024.
- [3]. Yu M, et al. A Bispecific Antibody Blocking Both TSLP and IL-4Rα for the Treatment of Allergic Inflammatory Diseases. *Cells.* 2025 Nov 7;14(22):1747.

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