Inclacumab

Cat. No.: HY-P99263

CAS No.: 1256258-86-2

Target: P-selectin

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description

Inclacumab (Anti-Human selectin P Recombinant Antibody) is a human monoclonal IgG4 antibody selectively targets P-selectin with a K_d value of 9.9 nM. Inclacumab inhibits P-selectin glycoprotein ligand 1 (PSGL-1) mimetic peptide bind with P-selectin with an IC_{50} value of 1.9 μg/mL and strongly inhibits cell adhesion[1][2][3].

In Vitro

Inclacumab (0.4-40 μg/mL; 5 min) significantly reduces flow adhesion of P-Selectin with Whole Blood (WB) and isolated White Blood Cell (I-WBC) and shows a more stronger effect on isolated white cells[1].
Inclacumab shows great binding affinity to P-selectin with a K_d value of 9.9 nM[2].
Inclacumab inhibits PSGL-1 mimetic peptide binding with P-selectin with an IC_{50} value of 1.9 μg/mL[2].
Inclacumab blocks the adhesion of PSGL-1 expressing cells to an immobilized P-selectin with an IC_{50} value of 430 ng/mL[2].
Inclacumab (0-100 μg/mL; 5min) dose-dependently inhibits thrombin receptor-activating peptide (TRAP)-induced platelet-leukocyte aggregates (PLA) levels with an IC_{50} value of 1.4 μg/mL[3].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Inclacumab (4 mg/kg; s.c. once) reduces TRAP- and ADP-induced PLA levels in cynomolgus monkeys[3].
Inclacumab (2-50 mg/kg; i.v.; once a week for 13 weeks) inhibits TRAP induced PLA levels in cynomolgus monkeys[3].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Cynomolgus monkeys[3]
Dosage:	4 mg/kg
Administration:	Subcutaneous injection; 4 mg/kg; once
Result:	Significantly reduced TRAP-induced PLA levels from 25% to 6% and supressed PLA formation ≥80% for at least 28 days post treatment. Remained plasma concentrations >20 μg/mL during post treatment for 28 days. Significantly inhibited the formation of ADP (10 μM)-induced PLAs.

Animal Model:	Cynomolgus monkeys[3]
Dosage:	2, 10, and 50 mg/kg

Administration:	Intravenous injection; once daily; for 13 weeks
Result:	Inhibited TRAP-induced PLA and remained concentrations at all three dose levels are higher than 20 μg/mL. Persisted the full inhibition of PLA formation between dosing period.

REFERENCES

[1]. Tarasev M, et al. S107: P-SELECTIN INHIBITOR INCLACUMAB REDUCES CELL ADHESION IN AN IN-VITRO ASSAYS SHOWING POTENTIAL FOR PREVENTION OF VASO-OCCLUSION EVENTS IN SICKLE CELL DISEASE. Hemasphere. 2022 Jan 31;6(Suppl):3-4.

[2]. Xin Geng, et al. Inclacumab, a Fully Human Anti-P-Selectin Antibody, Directly Binds to PSGL-1 Binding Region and Demonstrates Robust and Durable Inhibition of Cell Adhesion. Blood (2020) 136 (Supplement 1): 10–11.

[3]. Kling D, et al. Pharmacological control of platelet-leukocyte interactions by the human anti-P-selectin antibody inclacumab--preclinical and clinical studies. Thromb Res. 2013 May;131(5):401-10.

Caution: Product has not been fully validated for medical applications. For research use only.

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