Itepekimab

Cat. No.:	HY-P99673
CAS No.:	2226742-52-3
Target:	Interleukin Related; NF-κB
Pathway:	Immunology/Inflammation; NF-κB
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description	Itepekimab (REGN-3500) is an IgG4 monoclonal antibody against IL-33. Itepekimab reduced airway inflammation and related tissue damage in preliminary clinical studies. Itepekimab has potential effects in asthma, chronic obstructive pulmonary disease (COPD), and atopic dermatitis (AD)[1][2][3][4].
In Vitro	Itepekimab can bind IL-33 with high affinity and prevent the binding of ST2 D3 domain to IL-33, thus preventing the formation of IL-33/ST2/IL-1RAcP signaling complex and blocking the production of airway inflammatory mediator[4]. Itepekimab also binds with subnanomolar affinity to different IL-33 cleavage variants, blocks NF-kB signaling in reporter cell lines, and prevents cytokine release from human peripheral blood mononuclear cell[4]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Itepekimab ameliorates type 1 and type 2 lung inflammation and prevents characteristic lung remodeling in mice. Itepekimab prevents IL-33/ST2/IL-1RAcP complex formation and reconstitutes ciliated cells in a mouse model of persistent airway inflammation[4]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Wechsler ME, et al. Efficacy and Safety of Itepekimab in Patients with Moderate-to-Severe Asthma. N Engl J Med. 2021 Oct 28;385(18):1656-1668.

[2]. Kosloski MP, et al. Pharmacokinetics and pharmacodynamics of itepekimab in healthy adults and patients with asthma: Phase I first-in-human and first-in-patient trials. Clin Transl Sci. 2022 Feb;15(2):384-395.

[3]. Rabe KF, et al. Safety and efficacy of itepekimab in patients with moderate-to-severe COPD: a genetic association study and randomised, double-blind, phase 2a trial. Lancet Respir Med. 2021 Nov;9(11):1288-1298.

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