Product Data Sheet

Product Name: Reslizumab
Cat. No.: GC39430

Chemical Properties

Cas. No.	241473-69-8		
SMILES	[Reslizumab]		
Formula		M.Wt	
Solubility	Soluble in DMSO	Storage	Store at 4°C,Do not freeze
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ 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	Reslizumab		

Protocol

Cell experiment [1]:

Cell lines	TF-1 cell
Preparation Method	Add 50μl of TF-1 cell suspension (1×10^6) and 25μl of 0.045nM IL-5 to each well of a 96-well detection plate. Cultivate the cells in RPMI-1640 medium, supplemented with 10% fetal bovine serum, 2mM L-glutamine, 100U/ml penicillin-streptomycin, and 55μM β-mercaptoethanol, and pre-incubate at 37°C, 5% CO_2 for 30-45 minutes. After pre-incubation, add 25μl of different concentrations of Reslizumab (0.001, 0.01, 0.1, 10nM) to each well. Place the plates in a humidified 37°C/5% CO_2 incubator to cultivate for approximately 48 hours, and analyze the cell proliferation.

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Reaction Conditions	0.001, 0.01, 0.1, 10nM; 48h
Applications	Reslizumab treatment inhibited the proliferation of TF-1 in a concentration-dependent manner.
Animal experiment [2]:	
Animal models	Female C57BL/6NCrSlc mice
Preparation Method	Female C57BL/6NCrSlc mice (6 weeks old) were intraperitoneally injected with OVA (8μg per mouse) on days 0 and 14. Subsequently, based on the body weight on day 25, the mice were randomly stratified and grouped into groups of 5 or 7 mice each. On the day of the first OVA aerosol exposure (day 26), one injection of Reslizumab (200mg/kg) or the vehicle (normal saline) was given intraperitoneally (i.p.). From day 26 to day 32, the mice were placed in a plastic nebulization chamber (23×23×27cm) and inhaled 1% OVA (weight/volume) saline solution using a nebulizer for 1 hour each day. The negative control group (normal saline/vehicle) inhaled normal saline and received intravenous normal saline. The positive control group (1% OVA/vehicle) inhaled 1% OVA and received intravenous normal saline. On the third day of inhalation (day 28), 40μl of blood was drawn from the tail of the mice and plasma was separated for cytokine determination.
Dosage form	200mg/kg for once; i.p.
Applications	Reslizumab treatment significantly suppressed the production of IL-5 in OVA-treated mice.

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References:
[1] Liddament M, Husten J, Estephan T, et al. Higher binding affinity and in vitro potency of reslizumab for interleukin-5 compared with mepolizumab[J]. Allergy, Asthma & Immunology Research, 2018, 11(2): 291-298.
[2] Kageyama K, Kikuchi E, Hoshino N. Effect of anti-interleukin-5 antibody on development of vasculitis in an ovalbumin-induced eosinophilic vasculitis mouse model[J]. Frontiers in Pharmacology, 2025, 16: 1546785.

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Background

Reslizumab is a humanized IgG4/κ monoclonal antibody that targets IL-5 molecules, with the K_d value of 81pM[1]. Reslizumab binds to the α chain of the IL-5 receptor on the surface of eosinophils, thereby inhibiting the proliferation of eosinophils, Reslizumab can be metabolized through enzymatic protein hydrolysis into small peptides and amino acids[2]. Reslizumab has been widely used in animal models of asthma to control asthma symptoms and improve lung function[3].

In vitro, Reslizumab significantly inhibited the proliferation of TF-1 cells stimulated by IL-5 after 48 hours of treatment, with an IC_{50} value of 0.091nM[4].

In vivo, seven days after intraperitoneal injection of a single dose of 200mg/kg Reslizumab, the number of eosinophils in the blood and the level of serum IL-5 in the ovalbumin (OVA)-treated mice were significantly reduced, without affecting the production of IL-13[5]. In OVA-sensitized guinea pig model, Reslizumab (1mg/kg) administered intraperitoneally 2 hours before the OVA challenge reduced eosinophilia, airway hyperreactivity, and bronchoconstriction[6].

References:
[1] Padilla Galo A, Labor M, Tiotiu A, et al. Impact of reslizumab on outcomes of severe asthmatic patients: current perspectives[J]. Patient Related Outcome Measures, 2018: 267-273.
[2] Hom S, Pisano M. Reslizumab (Cinqair): an interleukin-5 antagonist for severe asthma of the eosinophilic phenotype[J]. Pharmacy and Therapeutics, 2017, 42(9): 564.
[3] Xu Y, Yang L, Zhao T, et al. Multifunctional Gold Nanoclusters for a Lung Tissue Distribution Study of a Novel Anti-asthma Inhaled Antibody[J]. Analytical Chemistry, 2025, 97(36): 19635-19653.
[4] Liddament M, Husten J, Estephan T, et al. Higher binding affinity and in vitro potency of reslizumab for interleukin-5 compared with mepolizumab[J]. Allergy, Asthma & Immunology Research, 2018, 11(2): 291-298.
[5] Kageyama K, Kikuchi E, Hoshino N. Effect of anti-interleukin-5 antibody on development of vasculitis in an ovalbumin-induced eosinophilic vasculitis mouse model[J]. Frontiers in Pharmacology, 2025, 16: 1546785.

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[6] Egan R W, Athwal D, Bodmer M W, et al. Effect of Sch 55700, a humanized monoclonal antibody to human interleukin-5, on eosinophilic responses and bronchial hyperreactivity[J]. Arzneimittelforschung, 1999, 49(09): 779-790.

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