

Lirentelimab

Cat. No.:	HY-P99371
CAS No.:	2283348-97-8
Target:	Apoptosis
Pathway:	Apoptosis
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description	<p>Lirentelimab (AK002) is a humanized IgG1 monoclonal antibody that targets sialic acid-binding Ig-like lectin 8 (SIGLEC8). Lirentelimab induces cell apoptosis of IL-5-activated eosinophils and inhibits IgE-mediated mast cell activation. Lirentelimab can be used for the research of eosinophilic gastritis and duodenitis^[1].</p>								
In Vitro	<p>Monovalent Lirentelimab fragment antigen-binding (fab) binds to recombinant SIGLEC8 extracellular domain (ECD) is determined to be 464 pM^[1].</p> <p>Lirentelimab shows high affinity to SIGLEC8 in vitro, to SIGLEC8 expressed on eosinophils, and to NK cells via its Fc region in human blood^[1].</p> <p>Lirentelimab (1 µg/mL) selectively binds to eosinophils in human peripheral blood, and eosinophils and mast cells from human lung tissue^[1].</p> <p>Lirentelimab (0.0001-100 µg/mL; 30 min) induces apoptosis of IL-5-activated eosinophils^[1].</p> <p>Lirentelimab (30 min) shows potent antibody-dependent cell-mediated cytotoxicity (ADCC) Activity on human eosinophils with an EC₅₀ value of 1.9 ng/mL to eosinophils in peripheral blood leukocytes (PBL) preparations from healthy donors^[1].</p> <p>Lirentelimab reduces eosinophil numbers in ex vivo human tissue^[1].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Apoptosis Analysis^[1]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>Eosinophils</td> </tr> <tr> <td>Concentration:</td> <td>10 µg/mL-1 pg/mL</td> </tr> <tr> <td>Incubation Time:</td> <td>30 min</td> </tr> <tr> <td>Result:</td> <td>Dose-dependently induced apoptosis of IL-5-activated (50 ng/mL) eosinophils.</td> </tr> </table>	Cell Line:	Eosinophils	Concentration:	10 µg/mL-1 pg/mL	Incubation Time:	30 min	Result:	Dose-dependently induced apoptosis of IL-5-activated (50 ng/mL) eosinophils.
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In Vivo	<p>Lirentelimab (100 µg; i.v. once) significantly inhibits IgE-mediated mast cell activation in a mice model of systemic anaphylaxis^[1].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <table border="1"> <tr> <td>Animal Model:</td> <td>Humanized mice (NSG-SGM3) engrafts with human thymus, liver, and HSC^[1]</td> </tr> <tr> <td>Dosage:</td> <td>100 µg</td> </tr> </table>	Animal Model:	Humanized mice (NSG-SGM3) engrafts with human thymus, liver, and HSC ^[1]	Dosage:	100 µg				
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Administration:	Intravenous injection; 100 µg, once
Result:	Completely prevented passive systemic anaphylaxis (PSA) as shown by a lack of change in rectal temperature and symptom scores in mice.

REFERENCES

[1]. Youngblood BA, et al. AK002, a Humanized Sialic Acid-Binding Immunoglobulin-Like Lectin-8 Antibody that Induces Antibody-Dependent Cell-Mediated Cytotoxicity against Human Eosinophils and Inhibits Mast Cell-Mediated Anaphylaxis in Mice. *Int Arch Allergy Immunol.* 2019;180(2):91-102.

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

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