

## Inebilizumab

<b>Cat. No.:</b>	HY-P99113
<b>CAS No.:</b>	1299440-37-1
<b>Target:</b>	CD19; ADC Antibody
<b>Pathway:</b>	Immunology/Inflammation; Antibody-drug Conjugate/ADC Related
<b>Storage:</b>	Please store the product under the recommended conditions in the Certificate of Analysis.

### BIOLOGICAL ACTIVITY

<b>Description</b>	Inebilizumab is an anti-CD19 monoclonal antibody (mAb) with enhanced antibody-dependent cell-mediated cytotoxicity against B cells. Inebilizumab can be used for multiple sclerosis and neuromyelitis optica research <sup>[1]</sup> .									
<b>In Vitro</b>	<p>Inebilizumab is derived from the mouse anti-human mAb HB12b, which had already shown impressive activity in depletion of B cells in transgenic mice carrying the human CD19 gene (hCD19 Tg)<sup>[1]</sup>.</p> <p>Inebilizumab potently depletes CD19-expressing B cells, including primary human B cells, B cell lines derived from multiple tumor types, and neoplastic B cells<sup>[1]</sup>.</p> <p>Inebilizumab demonstrates equal or better activity than Rituximab (HY-P9913) in depletion of human primary B cells in autologous ADCC assays and shows potent ADCC activity against human in vitro-differentiated and primary plasma cells<sup>[1]</sup>. MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>									
<b>In Vivo</b>	<p>Inebilizumab (MEDI-551) (0-10 mg/kg; i.v.; once) depletes B cells from blood and spleen by mouse macrophages in vivo and phagocytosis of murine B cells ex vivo<sup>[2]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <table border="1" data-bbox="345 1329 1515 1671"> <tr> <td><b>Animal Model:</b></td> <td>huCD19/CD20 double Tg mice<sup>[2]</sup></td> </tr> <tr> <td><b>Dosage:</b></td> <td>0.5, 2, or 10 mg/kg</td> </tr> <tr> <td><b>Administration:</b></td> <td>Tail vein injection, once</td> </tr> <tr> <td><b>Result:</b></td> <td>Depleted B cells from blood and spleen, B-cell depletion in blood and spleen was maintained for more than 2 weeks after a single 10 mg/kg administration (better than Rituximab). Resulted in a substantial reduction (on average by 91.4% by day 3) in BM B220+muCD19+ B cells. Led to depletion of B cell by mouse macrophages.</td> </tr> </table>		<b>Animal Model:</b>	huCD19/CD20 double Tg mice <sup>[2]</sup>	<b>Dosage:</b>	0.5, 2, or 10 mg/kg	<b>Administration:</b>	Tail vein injection, once	<b>Result:</b>	Depleted B cells from blood and spleen, B-cell depletion in blood and spleen was maintained for more than 2 weeks after a single 10 mg/kg administration (better than Rituximab). Resulted in a substantial reduction (on average by 91.4% by day 3) in BM B220+muCD19+ B cells. Led to depletion of B cell by mouse macrophages.
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### REFERENCES

[1]. Chen D, et al. Inebilizumab, a B Cell-Depleting Anti-CD19 Antibody for the Treatment of Autoimmune Neurological Diseases: Insights from Preclinical Studies. *J Clin Med*. 2016 Nov 24;5(12):107.

[2]. Herbst R, et al. B-cell depletion in vitro and in vivo with an afucosylated anti-CD19 antibody. *J Pharmacol Exp Ther*. 2010 Oct;335(1):213-22.

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

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