

## Margetuximab

Cat. No.:	HY-P99030
CAS No.:	1350624-75-7
Target:	EGFR
Pathway:	JAK/STAT Signaling; Protein Tyrosine Kinase/RTK
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

### BIOLOGICAL ACTIVITY

<b>Description</b>	Margetuximab (MGAH22) is a chimeric anti-HER2 monoclonal antibody optimized Fc domain, with an EC <sub>50</sub> value of 39.33 ng/mL. Margetuximab can be used for researching metastatic HER2-positive breast cancer <sup>[1]</sup> .													
<b>IC<sub>50</sub> &amp; Target</b>	EC <sub>50</sub> : 39.33 ng/mL (HER2) <sup>[1]</sup>													
<b>In Vitro</b>	<p>Margetuximab (MGAH22) enhances the antibody-dependent cell-mediated cytotoxicity activity of effector cells expressing the CD16A-158F variant<sup>[1]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Cell Proliferation Assay</p> <table border="1"> <tr> <td>Cell Line:</td> <td colspan="2">JIMT-1, MCF-7, ZR-75-1, SKBR-3, HT-29, SW750 and N87<sup>[1]</sup></td> </tr> <tr> <td>Concentration:</td> <td colspan="2">0.001-1000 ng/mL</td> </tr> <tr> <td>Incubation Time:</td> <td colspan="2">6 days</td> </tr> <tr> <td>Result:</td> <td colspan="2">Enhances the antibody-dependent cell-mediated cytotoxicity activity of effector cells expressing the CD16A-158F variant.</td> </tr> </table>		Cell Line:	JIMT-1, MCF-7, ZR-75-1, SKBR-3, HT-29, SW750 and N87 <sup>[1]</sup>		Concentration:	0.001-1000 ng/mL		Incubation Time:	6 days		Result:	Enhances the antibody-dependent cell-mediated cytotoxicity activity of effector cells expressing the CD16A-158F variant.	
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<b>In Vivo</b>	<p>Margetuximab (2-4 mg/kg; IP 5 or 6 times at weekly) can firstly and significantly reduces the tumor size at day 30 - 37 in mice model<sup>[1]</sup>.</p> <p>Margetuximab (15-150 mg/kg; IV; 6 weekly) exhibits well tolerated in cynomolgus monkeys, decreases NK cells by an average of 51%, and induces IL-6 release<sup>[1]</sup>.</p> <p>Margetuximab (50 mg/kg; IV; single dosage) exhibits favorable safety profile<sup>[1]</sup>.</p> <p>Pharmacokinetic Parameters of Margetuximab in cynomolgus monkeys<sup>[1]</sup>.</p> <table border="1"> <thead> <tr> <th></th> <th>Male, IV (50 mg/kg)</th> <th>Female, IV (50 mg/kg)</th> </tr> </thead> <tbody> <tr> <td>C<sub>max</sub> (mg/mL)</td> <td>1.62 ± 0.10</td> <td>1.70 ± 0.14</td> </tr> <tr> <td>AUC<sub>0-∞</sub> (mg·hour/mL)</td> <td>294.1 ± 53.2</td> <td>314.2 ± 31.3</td> </tr> </tbody> </table>			Male, IV (50 mg/kg)	Female, IV (50 mg/kg)	C <sub>max</sub> (mg/mL)	1.62 ± 0.10	1.70 ± 0.14	AUC <sub>0-∞</sub> (mg·hour/mL)	294.1 ± 53.2	314.2 ± 31.3			
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$T_{1/2\beta}$ (days)	9.3 ± 1.8	9.7 ± 1.1
Clearance (mL/hour)	0.43 ± 0.07	0.40 ± 0.04
$V_{SS}$ (mL)	132 ± 2	127 ± 8

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## REFERENCES

[1]. Nordstrom JL, et al. Anti-tumor activity and toxicokinetics analysis of MGAH22, an anti-HER2 monoclonal antibody with enhanced Fcγ receptor binding properties. Breast Cancer Res. 2011;13(6):R123. doi:10.1186/bcr3069

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

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