

## Zenocutuzumab

Cat. No.:	HY-P99507
CAS No.:	1969309-56-5
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>	Zenocutuzumab (MCLA-128) is a bispecific humanized IgG1 antibody containing two different Fab arms, targeting extracellular domains of HER2 and HER3 <sup>[1]</sup> .																	
<b>In Vitro</b>	<p>Zenocutuzumab (0.001-1000 nM; 96 hours) inhibits cell growth in lung and breast cancer cell lines<sup>[1]</sup>.            Zenocutuzumab (0.1-1000 nM; 24 hours) inhibits HER3 and AKT phosphorylation, induces markers of apoptosis and cell cycle arrest in lung and breast cancer cell lines<sup>[1]</sup>.            MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Cell Viability Assay<sup>[1]</sup></p> <table border="1"> <tr> <td>Cell Line:</td> <td>Human bronchiolar epithelial cell lines (HBEC)</td> </tr> <tr> <td>Concentration:</td> <td>0.001 nM, 0.01 nM, 0.1 nM, 1 nM, 10 nM, 100 nM, 1000 nM</td> </tr> <tr> <td>Incubation Time:</td> <td>96 h</td> </tr> <tr> <td>Result:</td> <td>Reduced the growth of isogenic HBEC expressing either CD74-NRG1 or VAMP2-NRG1 fusions.</td> </tr> </table> <p>Western Blot Analysis<sup>[1]</sup></p> <table border="1"> <tr> <td>Cell Line:</td> <td>HBEC-CD74-NRG1, LUAD-0061AS3, MDA-MB-175-VII cells</td> </tr> <tr> <td>Concentration:</td> <td>0.1 nM, 1 nM, 10 nM, 100 nM, 1000 nM</td> </tr> <tr> <td>Incubation Time:</td> <td>24 hours</td> </tr> <tr> <td>Result:</td> <td>Inhibited HER3, STAT3, AKT, p70S6K, and S6 phosphorylation.</td> </tr> </table>		Cell Line:	Human bronchiolar epithelial cell lines (HBEC)	Concentration:	0.001 nM, 0.01 nM, 0.1 nM, 1 nM, 10 nM, 100 nM, 1000 nM	Incubation Time:	96 h	Result:	Reduced the growth of isogenic HBEC expressing either CD74-NRG1 or VAMP2-NRG1 fusions.	Cell Line:	HBEC-CD74-NRG1, LUAD-0061AS3, MDA-MB-175-VII cells	Concentration:	0.1 nM, 1 nM, 10 nM, 100 nM, 1000 nM	Incubation Time:	24 hours	Result:	Inhibited HER3, STAT3, AKT, p70S6K, and S6 phosphorylation.
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<b>In Vivo</b>	<p>Zenocutuzumab (2.5-25 mg/kg; i.p.; once weekly; for 28 days) causes a statistically significant reduction of growth, including tumor regression<sup>[1]</sup>.            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>6 to 12-week-old female NSG™ (LUAD-0061AS3), BALB/c nude (OV-10-0050) or athymic</td> </tr> </table>		Animal Model:	6 to 12-week-old female NSG™ (LUAD-0061AS3), BALB/c nude (OV-10-0050) or athymic														
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	nude (ST2891, ST3204 and CTG-0953) mice injected with NRG1 fusion-positive patient-derived xenograft (PDX) tumors <sup>[1]</sup> .
Dosage:	2.5 mg/kg, 8 mg/kg, or 25 mg/kg
Administration:	i.p.; once weekly; for 28 days
Result:	Blocked growth of lung and ovarian cancer PDX models.

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## REFERENCES

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[1]. Alison M Schram, et al. Zenocutuzumab, a HER2xHER3 Bispecific Antibody, Is Effective Therapy for Tumors Driven by NRG1 Gene Rearrangements. *Cancer Discov.* 2022 May 2;12(5):1233-1247.

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

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