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## Cetuximab

<b>Cat. No.:</b>	HY-P9905
<b>CAS No.:</b>	205923-56-4
<b>Molecular Weight:</b>	145543.34
<b>Target:</b>	EGFR
<b>Pathway:</b>	JAK/STAT Signaling; Protein Tyrosine Kinase/RTK
<b>Storage:</b>	Please store the product under the recommended conditions in the Certificate of Analysis.

### BIOLOGICAL ACTIVITY

<b>Description</b>	Cetuximab (C225) is a human IgG1 monoclonal antibody that inhibits epidermal growth factor receptor (EGFR), with a $K_d$ of 0.201 nM for EGFR by SPR. Cetuximab has potent antitumor activity <sup>[1]</sup> .	
<b>IC<sub>50</sub> &amp; Target</b>	EGFR 0.147 nM (K <sub>d</sub> , Fixed A431 cells)	Soluble EGFR 0.201 nM (K <sub>d</sub> )
<b>In Vitro</b>	<p>Cetuximab (C225) is a monoclonal antibody that inhibits epidermal growth factor receptor (EGFR), with a <math>K_d</math> of 0.201 nM for soluble EGFR by SPR. Cetuximab also exhibits a <math>K_d</math> of 0.147 nM for EGFR in fixed A431 cells by ELISA<sup>[1]</sup>.</p> <p>Cetuximab (C225; 30 nM) time-dependently inhibits the proliferation of SCC-1, SCC-11B, SCC-38, and SCC-13Y cells after treatment for 8 d. Cetuximab (30 nM) causes G<sub>0</sub>/G<sub>1</sub> arrest, induces apoptosis, and reduces Rb, p27<sup>KIP1</sup>, Bcl-2, and Bax expression in SCC-13Y cells. Cetuximab (30 nM) also enhances radiosensitivity and increases radiation-induced apoptosis in SCC-13Y cells<sup>[3]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>	
<b>In Vivo</b>	<p>Cetuximab (1 mg/injection) has effect on the tumour volume but the effect is more pronounced on UT-SCC-14 xenografts. In UT-SCC-14 xenografts, Cetuximab significantly reduces the expression of EGFR, pEGFR and Ki67. Cetuximab significantly decreases the expression in the MCT1 and GLUT1 cells but differences are more pronounced in UT-SCC-14 xenografts<sup>[2]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>	

### CUSTOMER VALIDATION

- Cell Res. 2022 Oct 14.
- Cell Res. 2020 Dec;30(12):1063-1077.
- Mol Cancer. 2021 Jan 18;20(1):17.
- Am J Respir Crit Care Med. 2022 Jul 11.
- Nat Commun. 2022 Feb 1;13(1):594.

See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

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## REFERENCES

- [1]. Goldstein NI, et al. Biological efficacy of a chimeric antibody to the epidermal growth factor receptor in a human tumor xenograft model. Clin Cancer Res. 1995 Nov;1(11):1311-8.
- [2]. Gustafsson H, et al. EPR Oximetry of Cetuximab-Treated Head-and-Neck Tumours in a Mouse Model. Cell Biochem Biophys. 2017 Jul 29.
- [3]. Huang SM, et al. Epidermal growth factor receptor blockade with C225 modulates proliferation, apoptosis, and radiosensitivity in squamous cell carcinomas of the head and neck. Cancer Res. 1999 Apr 15;59(8):1935-40.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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