Catalog# BP-50179

Cetuximab (anti-EGFR)

Cetuximab (anti-EGFR: epidermal growth factor receptor), marketed under the brand name Erbitux, is an inhibitor of EGFR monoclonal humanized antibody interacting with the extracellular binding site of EGFR to block ligand stimulation. The antibody-drug conjugate (ADC) Cetuximab saratolacan, also known as Akalux, is a novel treatment for unresectable locally advanced or recurrent head and neck cancer has been approved in Japan. This ADC drug is a conjugate of Cetuximab with a photosensitizer called IR700 through linker. This biosimilar antibody is used for research only. MW: 145.781 KD.

Product Details	
CAS No.	205923-56-4
Species Reactivity	Human
Source	CHO
Isotype	Human IgG1
Class	Monoclonal
Type	Recombinant Antibody
Clone	Cetuximab biosimilar
Conjugate	Unconjugated
Immunogen	Human EGFR, 0.39 nM(Kd)
Purity	99.81%
Molecular Weight	145.781 KD
Protein Concentration	1 mg/ml
Formulation	100mMPro-Ac,20mMArg-Ac，pH5.0
Storage conditions	Store the undiluted solution at -20°C in the dark to avoid freeze-thaw cycles.

Applications	
In vitro	Cetuximab treatment increases mitochondrial priming of EGFR-expressing HeLa cells but not in EGFR-expressing MDA-MD-231 cells.
In vivo	C225 enhanced the antitumor activity of several chemotherapeutic drugs in mouse xenograft models. Cetuximab, exerts its antitumor efficacy by multiple mechanisms that include the inhibition of cell cycle progression by arrest in the G1- phase and decreased cell number in the S-phase. Cell cycle arrest in the G1-phase also induces apoptosis by the induction and activation of proapoptotic molecules. cetuximab alone and in synergy with carboplatin resulted in decreases of tumor size, metastatic spread, and MVD in NCI-N87 tumors with EGFR cell surface expression and absence of mutations in BRAF and K-ras, whereas cetuximab had minimal in vitro effect and no in vivo treatment efficacy in tumors derived from MKN-45, in which the phenotype was also BRAF and K-ras wildtype, but which had only weak cytoplasmic EGFR protein expression.
Cell Assay:	Cells were lysed at a density of 1 x 10^6/50 μL in lysis buffer (0.25 M Tris-HCl, 2% sodium dodecylsulfate, 4% β-mercaptoethanol, 10% glycerol, 0.02% bromophenol blue) supplemented with 1 X protease/phosphatase inhibitor cocktail. Cell lysates were then loaded onto polyacrylamide gels with sodium dodecyl sulfate. After electrophoresis, proteins were transferred to polyvinylidene difluoride (PVDF) membranes. The transblotted membranes were blocked for 1 hr and then probed with appropriate primary antibodies overnight at 4 °C. Next day, the membranes were washed three times for a total of 30 min and then incubated with IRDye 680RD Donkey anti-Rabbit IgG (H + L) or IRDye 800CW Donkey anti-Mouse IgG (H + L) in darkness at room temperature for 1 h. After another three washes, scan immunoblot membranes and quantify band intensity.
Animal Study:	**Objective:** Antitumor activity of cetuximab in murine gastric cancer model **Animal Models:** Nude mouse model for human gastric cancer (CD-1/nu-nu mice) **Formulation:** 0.9% NaCl **Dosages:** 1 mg/kg **Administration:** i.p. **Reference:** https://www.ncbi.nlm.nih.gov/pubmed/22011788 **Objective:** To investigate the relationship between the EGFR levels and the responsiveness to cetuximab treatment in human cancer xenograft models **Animal Models:** Female athymic, nude mice were implanted s.c. with ~1 mm3 tumor fragments **Formulation:** PBS **Dosages:** 0.25, 0.5 or 1 mg/mouse **Administration:** i.p.

	Reference: https://www.ncbi.nlm.nih.gov/pubmed/27186886