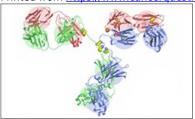
Cetuximab

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Brand name: Erbitux® FDA approval: Yes Manufacturer Link

Usage:

Cetuximab is approved for the treatment of: advanced squamous cell carcinoma of the head and neck (in combination with radiation). Recurrent or metastatic squamous cell carcinoma of the head and neck (after failure of platinum-based therapy). Metastatic, EGFR-expressing colorectal cancer (after failure of irinotecan and oxaliplatin). Metastatic, EGFR-expressing colorectal cancer (in combination with irinotecan)1

1 Chu, E., & DeVita, V. T. (2015). Physicians' cancer chemotherapy drug manual 2015. Burlington, MA: Jones & Bartlett Learning.

Mechanism:

Cetuximab (Erbitux®) binds to the human epidermal growth factor receptor (EGFR) to inhibit the binding of epidermal growth factor (EGF). This action prohibits the activation of receptor-associated kinases within the cell, resulting in an inhibition of cell growth, promotion of apoptosis and decrease in the production of matrix metalloproteases (MMPs) and vascular endothelial growth factor (VEGF)--two factors necessary for tumor maintenance and growth. 1

The 3D diagram below shows the molecular structure of Cetuximab complexed with FH3 meditope variant.



1 Chu, E., & DeVita, V. T. (2015). Physicians' cancer chemotherapy drug manual 2015. Burlington, MA: Jones & Bartlett Learning.

Side effects:

Side Effects include: infusion reactions (airway obstruction, low blood pressure, loss of consciousness or cardiac arrest), skin rash, inflammation or abscess formation, headache, diarrhea, infection. The most frequent side effects are acnelike rashes, weakness or discomfort, diarrhea, and nausea. 1

1 Chu, E., & DeVita, V. T. (2015). Physicians' cancer chemotherapy drug manual 2015. Burlington, MA: Jones & Bartlett Learning.

Contraindications:

The most serious toxicities reported with cetuximab are cardiopulmonary arrest, pulmonary toxicity and electrolyte abnormalities (low potassium, magnesium and/or calcium levels). Due to potential harm to a developing fetus, cetuximab should be used with caution in pregnant women and those on cetuximab treatment should avoid becoming pregnant and should not breastfeed.