Cetuximab

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Brand name: Erbitux®
FDA approval: Yes
Manufacturer Link
Usage:

Cetuximab is approved for the treatment of: advanced squamous cellcarcinoma 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

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

Mechanism:

Cetuximab (Erbitux®) binds to the human epidermalgrowth 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 ofmatrix 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.

Stick Ribbon Rotate

- 1Chu, E., & DeVita, V. T. (2015). Physicians' cancerchemotherapy 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 acne-like rashes, weakness or discomfort, diarrhea, and nausea.1

- 1Chu, E., & DeVita, V. T. (2015). Physicians' cancerchemotherapy 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.