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Human EGFR Antibody

Biotin Conjugate

Recombinant Monoclonal Antibody

Product Information

Product No.: E361

Clone: 225

Isotype: Mouse IgG1 κ

Storage: Sterile 2° to 8°C

Product Description

Specificity:

C225 specifically binds to the human epidermal growth factor receptor (EGFR) on the surface of cancer cells, inhibiting the receptor's activity and blocking the binding of ligands such as epidermal growth factor (EGF).

Antigen Distribution:

EGFR is overexpressed on the cell surfaces of various tumor cell types and is also found in the plasma membranes, cytoplasm, and cell junctions of many healthy tissues, including those associated with the Skin – Epidermis development cluster of The Human Protein Atlas. EGFR is also found in the blood secretome.

Background:

Epidermal growth factor receptor (EGFR, also known as ErbB1 or HER 1) is a glycoprotein that belongs to the receptor tyrosine kinase. It plays a role in activating signaling pathways essential, for cellular proliferation, differentiation, and survival[1-3]. During embryogenesis organogenesis and throughout adulthood EGFR is involved in processes such as tissue growth, differentiation, maintenance, and repair[2]. Moreover, EGFR acts as a host factor for viral entry in diseases like hepatitis B[4], hepatitis C[5], and gastroenteritis[6]. It has also been found to play a role in SARS-CoV-2 infection[7-9].

Dysregulation of EGFR due to mutation or altered signaling is associated with diseases like Parkinson's[2], Alzheimer's[1, 2], and amyotrophic lateral sclerosis[2]. Additionally, it has been implicated in the development of cancers including lung, glioblastoma, brain, breast, colorectal, and ovarian[3]. The binding of ligands to EGFR in cancer cells has been linked to abnormal cell proliferation, invasion, metastasis, angiogenesis, and reduced apoptosis[10]. Consequently, EGFR serves as a target for cancer treatments including monoclonal humanized antibodies such as panitumumab and cetuximab along with selective small molecule inhibitors[11-13].

Human Anti-EGFR antibody, clone 225 is a research-grade biosimilar of the monoclonal antibody drug cetuximab. This chimeric antibody contains components from both humans and mice. 225 has been extensively researched in forms of cancer such, as head and neck cell carcinoma, colorectal cancer, and non-small cell lung cancer. Studies have shown that it can be effective when used alongside chemotherapy or radiation therapy presenting an opportunity to enhance outcomes[14-22].

Known Reactivity Species:

Human

Expression Host:

HEK-293 Cells

Format:

Biotin

410 Axminister Dr, St. Louis, MO 63026 (800) 538-1145 leincoglobal@leinco.com

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Immunogen:
Purified EGFR from A431 cells

Formulation
This biotinylated antibody is formulated in 0.01 M phosphate buffered saline (150 mM NaCl) PBS pH 7.4, 1% BSA and 0.09% sodium azide as a preservative.

Storage and Stability
This biotinylated antibody is stable when stored at 2-8°C.

Do not freeze.

Other Applications Reported in Literature:
FA,
FC,
IF,
IHC,
IP,
WB

Country of Origin
USA

References
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Additional References Available on our Product Page.