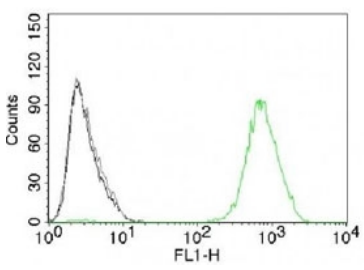
# EGFR Antibody / Epidermal growth factor receptor / Extracellular domain [clone GFR450] (V2105)

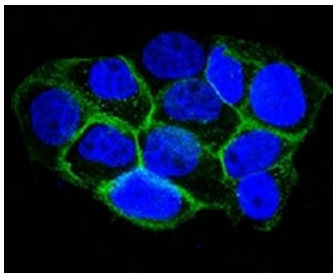
| Catalog No. | Formulation | Size |
|---|---|---|
| V2105-100UG | 0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide | 100 ug |
| V2105-20UG | 0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide | 20 ug |
| V2105SAF-100UG | 1 mg/ml in 1X PBS; BSA free, sodium azide free | 100 ug |

## Bulk quote request

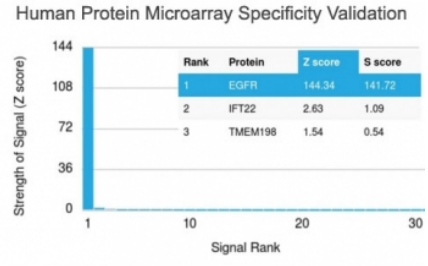
| | |
|---|---|
| **Species Reactivity** | Human |
| **Format** | Purified |
| **Host** | Mouse |
| **Clonality** | Monoclonal (mouse origin) |
| **Isotype** | Mouse IgG2a, kappa |
| **Clone Name** | GFR450 |
| **Purity** | Protein G affinity chromatography |
| **Buffer** | 1X PBS, pH 7.4 |
| **Gene ID** | 1956 |
| **Localization** | Cell surface |
| **Applications** | Flow Cytometry : 1-2ug/million cells<br>Immunofluorescence : 1-3ug/ml |
| **Limitations** | This **EGFR antibody** is available for research use only. |



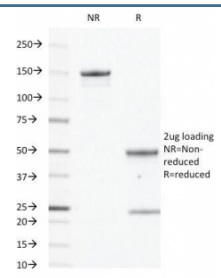

FACS testing of A431 cells with isotype control (gray), without primary antibody (black) and EGFR antibody (green, clone GFR450).



Immunofluorescent staining of A431 cells with Alexa Fluor conjugated EGFR antibody (green, clone GFR450) and DAPI nuclear stain (blue).




Analysis of HuProt(TM) microarray containing more than 19,000 full-length human proteins using EGFR antibody (clone GFR450). These results demonstrate the foremost specificity of the GFR450 mAb.
Z- and S- score: The Z-score represents the strength of a signal that an antibody (in combination with a fluorescently-tagged anti-IgG secondary Ab) produces when binding to a particular protein on the HuProt(TM) array. Z-scores are described in units of standard deviations (SD's) above the mean value of all signals generated on that array. If the targets on the HuProt(TM) are arranged in descending order of the Z-score, the S-score is the difference (also in units of SD's) between the Z-scores. The S-score therefore represents the relative target specificity of an Ab to its intended target.




SDS-PAGE analysis of purified, BSA-free EGFR antibody (clone GFR450) as confirmation of integrity and purity.

## Description

EGFR Antibody recognizes Epidermal growth factor receptor, a transmembrane receptor tyrosine kinase that plays a central role in regulating cell proliferation, survival, differentiation, and migration. Epidermal growth factor receptor is also widely known as EGFR, ErbB1, and HER1 in the literature, and belongs to the ErbB family of receptor tyrosine kinases. EGFR Antibody is commonly used in research settings to study receptor-mediated signaling pathways that drive normal epithelial biology as well as dysregulated growth signaling in cancer. The EGFR protein is primarily localized to the cell membrane, where ligand binding triggers receptor dimerization and activation of downstream signaling cascades.

Epidermal growth factor receptor is encoded by the EGFR gene and is highly expressed in a variety of epithelial tissues, including skin, gastrointestinal epithelium, and respiratory epithelium. Upon activation, EGFR initiates signaling through pathways such as MAPK, PI3K-AKT, and JAK-STAT, which collectively regulate cell cycle progression and survival. EGFR Antibody enables investigation of these signaling networks and supports analysis of receptor expression levels, localization, and activation status in diverse experimental models. Because EGFR signaling is tightly regulated under normal conditions, changes in EGFR expression or activity are of particular interest in studies of growth control and tissue homeostasis.

In cancer research, EGFR is one of the most extensively studied oncogenic receptors. Overexpression, gene amplification, or activating mutations of Epidermal growth factor receptor have been documented in multiple tumor types, including lung carcinoma, colorectal cancer, head and neck squamous cell carcinoma, and glioblastoma. EGFR Antibody supports research focused on tumor biology, receptor-driven oncogenesis, and mechanisms of resistance to targeted therapies. As a result, EGFR, ErbB1, and HER1 are frequently examined as biomarkers and signaling drivers in translational cancer studies.

Beyond oncology, EGFR signaling also contributes to wound healing, tissue regeneration, and developmental processes.

Dysregulation of Epidermal growth factor receptor activity has been implicated in inflammatory conditions and abnormal epithelial repair. EGFR Antibody provides a valuable tool for examining EGFR expression and distribution in both normal and disease-associated tissues. Clone GFR450 is designed to recognize Epidermal growth factor receptor and may be applied to studies investigating EGFR-dependent signaling, receptor biology, and epithelial cell regulation in relevant research applications.

## Application Notes

The concentration stated for each application is a general starting point. Variations in protocols, secondaries and substrates may require the EGFR antibody to be titered up or down for optimal performance.

1. Staining of formalin-fixed tissues requires boiling tissue sections in 10mM citrate buffer, pH 6.0, for 10-20 min followed by cooling at RT for 20 minutes.

## Immunogen

The recombinant extracellular domain of human EGFR protein was used as the immunogen for the EGFR antibody.

## Storage

Store the EGFR antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

## Alternate Names

ERBB1; Errp; HER1; mENA; PIG61; Proto-oncogene c-ErbB-1; Receptor Tyrosine Protein Kinase; Urogastrone; wa2; Wa5, EGFR antibody, ERBB1 antibody

References (1)