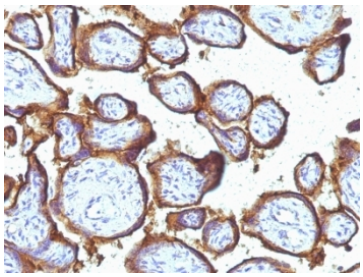
EGFR Antibody 31G7 / Receptor Tyrosine Kinase and Tumor Marker [clone 31G7] (V2485)

Catalog No.	Formulation	Size
V2485-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V2485-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V2485SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V2485IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

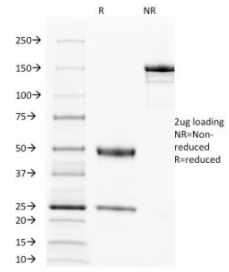
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Bulk quote request

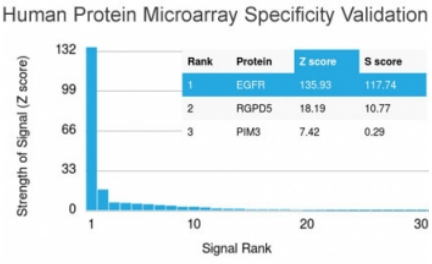
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2a, kappa
Clone Name	31G7
Purity	Protein G affinity chromatography
UniProt	P00533
Localization	Cell surface
Applications	Flow Cytometry : 0.5-1ug/10^6 cells Immunofluorescence : 1-2ug/ml Immunohistochemistry (FFPE) : 2-4ug/ml for 30 min at RT
Limitations	This EGFR Antibody 31G7 / Receptor Tyrosine Kinase and Tumor Marker is available for research use only.



EGFR Antibody Placenta IHC. Immunohistochemistry analysis of FFPE human placenta tissue stained with EGFR antibody detecting Epidermal growth factor receptor, clone 31G7. Strong membranous staining is observed in trophoblastic cell layers, consistent with EGFR localization as a receptor tyrosine kinase involved in epithelial signaling and growth regulation. Surrounding stromal regions show comparatively reduced signal. Hematoxylin counterstain highlights nuclei in blue.



SDS-PAGE Analysis of Purified, BSA-Free EGFR Antibody (clone 31G7). Confirmation of Integrity and Purity of the Antibody.



EGFR Antibody HuProt Microarray. Analysis of a HuProt(TM) microarray containing more than 19,000 full-length human proteins using EGFR antibody detecting Epidermal growth factor receptor, clone 31G7. The antibody shows a strong and highly specific signal for EGFR with a markedly elevated Z-score and clear separation from lower-ranked proteins, resulting in a high S-score consistent with target specificity. Z-score represents signal intensity in standard deviations above the array mean, while S-score reflects the difference between the top-ranked target and subsequent signals, indicating relative binding specificity of the monoclonal antibody.

Description

Epidermal growth factor receptor (EGFR), also known as ERBB1 or HER1, is a transmembrane receptor tyrosine kinase that plays a central role in regulating cell proliferation, survival, differentiation, and migration. EGFR Antibody, clone 31G7, is a mouse monoclonal antibody developed to detect this key signaling receptor, which is widely studied in cancer biology, epithelial tissue regulation, and targeted therapeutic research. This antibody is part of a collection of Human Protein Microarray validated antibodies that have been screened for specificity across thousands of proteins.

EGFR is activated upon binding of ligands such as epidermal growth factor and transforming growth factor alpha, leading to receptor dimerization and autophosphorylation of intracellular tyrosine residues. This activation initiates multiple downstream signaling cascades, including the MAPK, PI3K-AKT, and JAK-STAT pathways, which coordinate cellular responses related to growth, survival, and motility. Tight regulation of EGFR signaling is essential for normal tissue homeostasis, particularly in epithelial compartments where controlled proliferation and differentiation are required.

In normal tissues, EGFR is predominantly expressed on the cell membrane of epithelial cells, where it mediates ligand-dependent signaling. Membranous localization is a defining feature of EGFR detection in immunohistochemistry and is often used to assess receptor expression patterns in tissue sections. In cancer, EGFR expression is frequently increased or dysregulated, leading to sustained signaling that promotes tumor growth, invasion, and resistance to apoptosis. Cytoplasmic staining may also be observed in some contexts, reflecting receptor internalization and trafficking following activation.

EGFR is a well-established biomarker in a wide range of malignancies, including non-small cell lung carcinoma, colorectal cancer, head and neck squamous cell carcinoma, and certain breast cancers. Genetic alterations such as gene amplification, activating mutations, and overexpression contribute to oncogenic signaling and influence therapeutic response to EGFR-targeted agents. As a result, EGFR remains one of the most extensively studied receptor tyrosine kinases in oncology and a central focus in precision medicine strategies.

Clone 31G7 has been widely utilized in the literature, with extensive publication support demonstrating its use in detecting EGFR expression across diverse experimental systems and tissue types. In addition, microarray-based specificity validation confirms selective recognition of EGFR relative to other proteins, supporting its reliability in research applications. These characteristics make this EGFR Antibody a valuable tool for investigating receptor signaling, tumor biology, and epithelial cell regulation across a broad range of biological contexts.

A comprehensive selection of EGFR antibody products, including additional formats and applications, is available on our EGFR Antibody landing page.

Application Notes

Optimal dilution of the EGFR Antibody 31G7 / Receptor Tyrosine Kinase and Tumor Marker should be determined by the researcher.

1. Digest formalin-fixed tissues with Protease at 1mg/ml PBS, pH 7.4 for 10 min at 37oC
2. The prediluted format is supplied in a dropper bottle and is optimized for use in IHC. After epitope retrieval step (if required), drip mAb solution onto the tissue section and incubate at RT for 30 min.

Immunogen

Human EGF Receptor purified from A431 cells 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

EGFR antibody, EGF receptor antibody, Epidermal growth factor receptor antibody, ERBB1 antibody, HER1 antibody, clone 31G7 antibody

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