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Datasheet for 600-401-905

EGFR Antibody

Overview

Description:	Anti-EGFR (RABBIT) Antibody - 600-401-905
Item No.:	600-401-905
Size:	100 µg
Applications:	ELISA, WB
Reactivity:	Human
Host Species:	Rabbit

Product Details

Background:	Anti-EGFR Antibody is ideal for Western Blotting, ELISA and IHC. EGFR is a transmembrane glycoprotein that is a member of a family of protein tyrosine kinases crucial in maintaining a normal balance in cell growth and development. Growth factor receptors are involved not only in promoting the proliferation of normal cells but also in the aberrant growth of many types of human tumors. For example, the epidermal growth factor receptor (EGFR) is mutated and/or overexpressed in many common solid human squamous cell carcinomas including breast, brain, bladder, lung, gastric, head & neck, esophagus, cervix, vulva, ovary, and endometrium. Over-expression of the EGFR gene occurs in carcinomas with and without gene amplification. EGFR and erbB-2 are particularly important in breast cancer because increased production or activation has been associated with poor prognosis. EGFR belongs to a family of growth factor receptors, which also includes ErbB-2/HER-2/neu, ErbB-3/HER-3/neu and ErbB-4/HER-4neu. EGFR can heterodimerize with each of the members of this family.
Synonyms:	rabbit anti-EGFR antibody, Epidermal growth factor receptor antibody, Proto-oncogene c-ErbB-1, Receptor tyrosine-protein kinase erbB-1, erbb 1, Erbb-1, Erbb1, HER1 antibody
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	EGFR
Reactivity:	Human

Immunogen Type:	Conjugated Peptide
Immunogen:	This affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to the C-Terminus near amino acids 1175 -1200 of human EGFR protein.
Purity/Specificity:	EGFR Antibody is directed against human epidermal growth factor receptor (EGFR) and is useful in determining its presence in ELISA and western blotting experiments. This antibody can detect EGFR from human, mouse and rat sources. Reactivity of this antibody with EGFR from other species is unknown.
Relevant Links:	• UniProtKB - P00533 • NCBI - 29725609 • GeneID - 1956

Application Details

Tested Applications:	ELISA, WB
Application Note:	This affinity purified antibody has been tested for use in ELISA and western blot. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 170 kDa in size corresponding to EGFR protein by western blotting in the appropriate cell lysate or extract. This antibody detects both non-phosphorylated and phosphorylated EGFR at residue Y1197.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:8,000 - 1:32,000
IHC:	User Optimized
WB:	1:500 - 1:5,000

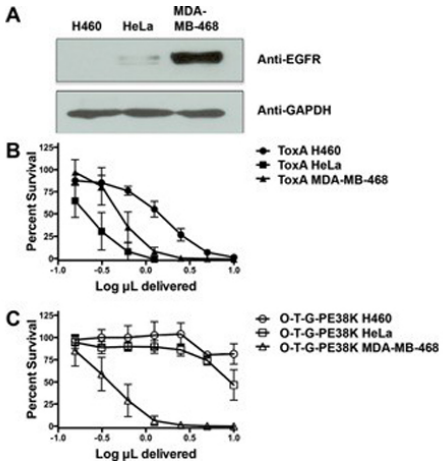
Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	0.99 mg/ml by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

Shipping & Handling

Shipping Condition:	Dry Ice
Storage Condition:	Store Anti-EGFR at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

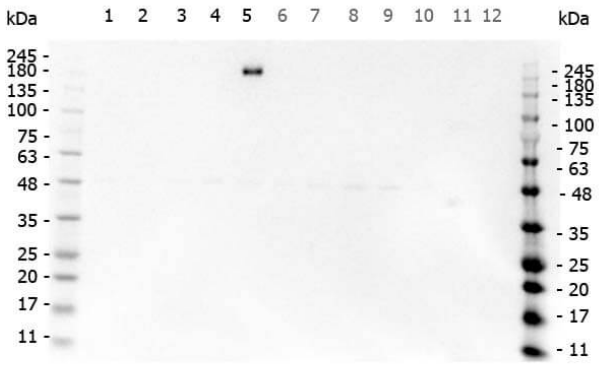
Images



Western Blot
Relative expression levels of epidermal growth factor receptor (EGFR) in different tumor cell lines and the relative sensitivities of those cell lines to culture supernatants of VNP20009 expressing either wild type ToxA or O-T-G-PE38K. A) Immunoblot of whole cancer cell lysates using antibodies against either human EGFR or human GAPDH. B) Dose-response curve of ToxA against H460 (●), HeLa (▪), and MDA-MB-468 (▯) cancer cells. C) Dose-response curve of O-T-G-PE38K against H460 (○), HeLa (□), and MDA-MB-468 (▯) cancer cells. The experimental error is expressed as the SD. Fig 6.
PMID: 27260220



Western Blot
Western blot using Rockland's Affinity Purified anti-EGFR antibody shows detection of a band at ~170 kDa corresponding to human EGFR (arrowhead). Lane 1: unstimulated A431 whole cell lysate (p/n W09-000-361). Lane 2: EGF (50 ng/ml for 15 min) stimulated A431 whole cell lysates (p/n W09-000-362). Approximately 30µg of lysate was separated on a 4-20% Tris-Glycine gel by SDS-PAGE and transferred onto nitrocellulose. After blocking the membrane was probed with the primary antibody diluted to 1:1,000. Reaction occurred overnight at 4° C followed by washes and reaction with a 1:10,000 dilution of IRDye800 conjugated Gt-a-Rabbit IgG [H&L] MX (p/n 611-132-122) for 45 min at room temperature (800 nm channel, green). Molecular weight estimation was made by comparison to prestained MW markers in lane M (700 nm channel, red). IRDye800 fluorescence image was captured using the Odyssey® Infrared Imaging System developed by LI-COR. IRDye is a trademark of LI-COR, Inc. Other detection systems will yield similar results.



Western Blot

Western Blot of Rabbit anti-EGFR antibody. Marker: Opal Pre-stained ladder (p/n MB-210-0500). Lane 1: HEK293 lysate (p/n W09-000-365). Lane 2: HeLa Lysate (p/n W09-000-364). Lane 3: MCF-7 Lysate (p/n W09-000-360). Lane 4: Jurkat Lysate (p/n W09-000-370). Lane 5: A431 Lysate (p/n W09-000-361). Lane 6: A549 Lysate (p/n W09-001-372). Lane 7: LNCap Lysate (p/n W09-001-GJ9). Lane 8: MOLT-4 Lysate (p/n W09-001-GK2). Lane 9: Ramos Lysate (p/n W09-000-GK4). Lane 10: Raji Lysate (p/n W09-001-368). Lane 11: A-172 Lysate (p/n W09-001-GL5). Lane 12: NIH/3T3 Lysate (p/n W10-000-358). Load: 35 µg per lane. Primary antibody: EGFR antibody at 1ug/mL overnight at 4C. Secondary antibody: Peroxidase rabbit secondary antibody (p/n 611-103-122) at 1:30,000 for 60 min at RT. Blocking Buffer: 1% Casein-TTBS (p/n MB-082) for 30 min at RT.
Predicted/Observed size: 170kDa for EGFR.

References

- Ijima M et al. Oriented immobilization to nanoparticles enhanced the therapeutic efficacy of antibody drugs. *Acta Biomater.* (2019)
- Dong J et al. Therapeutic efficacy of a synthetic epsin mimetic peptide in glioma tumor model: uncovering multiple mechanisms beyond the VEGF-associated tumor angiogenesis. *J Neurooncol.* (2018)
- Quintero, D et al. EGFR-targeted Chimeras of Pseudomonas ToxA released into the extracellular milieu by attenuated Salmonella selectively kill tumor cells. *Biotechnology and Bioengineering* (2016)

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