



Rev: A
Release Date: 04/13/2014
IVD

EGFR- EP22

Clone	EP22
Source	Rabbit Monoclonal
Cat #	PR040-6ml RTU PR040-3ml RTU
Regulatory Status	IVD

Intended Use:

This antibody is intended for use to qualitatively identify Cytokeratin 8 and 18 by light microscopy in formalin fixed, paraffin embedded tissue sections using immunohistochemical detection methodology. Interpretation of any positive or negative staining must be complemented with the evaluation of proper controls and must be made within the context of the patient's clinical history and other diagnostic tests. A qualified pathologist must perform evaluation of the test.

Summary and Explanation:

Epidermal growth factor receptor (EGFR) is a 170 kD transmembrane glycoprotein which can bind and become activated by various ligands including epidermal growth factor (EGF), transforming growth factor alpha (TGF α) and certain virally encoded growth factors. Ligand binding activates the intrinsic tyrosine kinase activity of the receptor, which is associated with the intracellular domain of the molecule. Activation of the kinase results in the rapid autophosphorylation of the EGFR, and subsequent phosphorylation of other cellular substrates such as phospholipase C-II. A number of signaling events follow, such as the elevation of intracellular calcium, which results in various cellular responses including increased DNA synthesis, cell proliferation and cell differentiation.

This antibody detects both EGFR phosphorylated on Tyr1068 of the mature human isoform 1 (corresponding to Y1092 from the precursor form P00533-1/p170), and also unphosphorylated EGFR.

Immunogen: A synthetic phospho-peptide corresponding to residues Tyr1068 of human EGFR was used as immunogen.

Isotype: Rabbit IgG

Reagent Provided:

Pre-diluted format: PathnSitu ready to use antibodies are pre-titrated to optimal staining conditions. Further dilution may lose the activity and may yield to sub-optimal staining.

Storage Recommendations: Store at 2°-8°C. Do not use after expiration date provided on the vial.

Staining Recommendations:

Antigen Retrieval Solution: Use **Tris-EDTA Buffer(PathnSitu Cat # PS008)** as antigen retrieval solution Heat Retrieval Method: Retrieve sections under steam pressure for 15 min using PathnSitu's MERS (Multi Epitope Retrieval System) then allow solution to cool for 10 minutes then transfer tissue sections/slides to distilled water.

Primary Antibody: Cover the tissue sections with primary antibody and incubate for 30 min at room temperature when used PathnSitu PolyExcel Detection System.

Detection System: Refer to PathnSitu PolyExcel detection system protocol or manufacturer's detection kit staining protocol when used other vendor detection system.

Cellular Localization: Membrane and /or Cytoplasm

Positive Control: Esophagus, Tongue, Squamous Cell Ca

Troubleshooting: Follow the antibody specific protocol recommendations according to data sheet provided. If unusual results occur, contact PathnSitu Technical Support at 040-2701 5544 or techsupport@pathnsitu.com.

Limitations and Warranty: There are no warranties, expressed or implied, which extend beyond this description. PathnSitu is not liable for property damage, personal injury, or economic loss caused by this product.

Bibliography:

1. Wikstrand CJ, Hale LP, Batra SK, Hill ML, Humphrey PA, Kurpad SN, McLendon RE, Moscatello D, Pegram CN, Reist CJ, Traweek ST, Wong AJ, Zulatsky MR, Bigner DD. Monoclonal antibodies against EGFRvIII are tumor specific and react with breast and lung carcinomas and malignant gliomas. *Canc Res* 1995;55(14):3140-8.
2. Gullick WJ. Prevalence of aberrant expression of the epidermal growth factor receptor in human cancers. *Br Med Bull* 1991;47(1):87-98.
3. Carpenter G. Receptors for epidermal growth factor and other polypeptide mitogens. *Ann Rev Biochem* 1987;56:881-914.
4. Margolis B, Rhee SG, Felder S, Mervic M, Lyall R, Levitzki A, Ullrich A, Zilberstein A, Schlessinger J. EGF induces tyrosine phosphorylation of phospholipase C-II: A potential mechanism for EGFR signaling. *Cell* 1989;57(7):1101-7.
5. Schlessinger J, Schreiber AB, Levi A, Lax I, Libermann T, Yarden Y. Regulation of cell proliferation by epidermal growth factor. *CRCCrit Rev Biochem* 1983;14(2):93-111.

EGFR, EP22 antibody has been created by Epitomics Inc., using Epitomics' proprietary rabbit monoclonal antibody technology covered under Patent No.'s 5,675,063 and 7,402,409.