SunLong Biotech Co.,LTD
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Rabbit Anti-EGFR antibody

SL0165R

Product Name	EGFR
Chinese Name	表皮生长因子受体抗体
Alias	EGFR; Avian erythroblastic leukemia viral (v erb b) oncogene homolog; Avian erythroblastic le oncogene homolog; Cell growth inhibiting protein 40; Cell proliferation inducing protein 61; EGI growth factor receptor (avian erythroblastic leukemia viral (v erb b) oncogene homolog); Epider receptor (erythroblastic leukemia viral (v erb b) oncogene homolog avian); Epidermal growth fa Erbb; Erbb1; HER1; mENA; Oncogene ERBB; PIG61; Receptor tyrosine protein kinase ErbB 1 protein kinase ErbB1; Urogastrone; wa2; Wa5; EGFR_HUMAN.
Research Area	Tumour Cell biology immunology Growth factors and hormones
Immunogen Species	Rabbit
Clonality	Polyclonal
React Species	Human, Rat, (predicted: Mouse, Dog, Pig,)
Applications	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,Flow-Cyt=1μg/Test （Par antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Theoretical molecular weight	130kDa
Cellular localization	The nucleus cytoplasmic The cell membrane Secretory protein
Form	Liquid
Concentration	1mg/ml
immunogen	KLH conjugated synthetic peptide derived from human EGFR: 951-1050/1210 <Cytoplasmic>
Lsotype	IgG
Purification	affinity purified by Protein A
Buffer Solution	1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.
Storage	Shipped at 4℃. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.

Attention This product as supplied is intended for research use only, not for use in human, therapeutic or d

PubMed PubMed

The protein encoded by this gene is a transmembrane glycoprotein that is a member of the protei
This protein is a receptor for members of the epidermal growth factor family. EGFR is a cell surfa
epidermal growth factor. Binding of the protein to a ligand induces receptor dimerization and tyr
autophosphorylation and leads to cell proliferation. Mutations in this gene are associated with lu
alternatively spliced transcript variants that encode different protein isoforms have been found fo
by RefSeq, Jul 2010]

Product Detail

Function:
Receptor tyrosine kinase binding ligands of the EGF family and activating several signaling casc
extracellular cues into appropriate cellular responses. Known ligands include EGF, TGFA/TGF-
epigen/EPGN, BTC/betacellulin, epiregulin/EREG and HBEGF/heparin-binding EGF. Ligand bi
homo- and/or heterodimerization and autophosphorylation on key cytoplasmic residues. The pho
recruits adapter proteins like GRB2 which in turn activates complex downstream signaling cascad
major downstream signaling cascades including the RAS-RAF-MEK-ERK, PI3 kinase-AKT, PL
STATs modules. May also activate the NF-kappa-B signaling cascade. Also directly phosphoryl
RGS16, activating its GTPase activity and probably coupling the EGF receptor signaling to the G
receptor signaling. Also phosphorylates MUC1 and increases its interaction with SRC and CTN
Isoform 2 may act as an antagonist of EGF action.

Subunit:
Binding of the ligand triggers homo- and/or heterodimerization of the receptor triggering its auto
Heterodimer with ERBB2. Interacts with ERRFI1; inhibits dimerization of the kinase domain and
Part of a complex with ERBB2 and either PIK3C2A or PIK3C2B. Interacts with GRB2; an adapt
receptor to downstream signaling pathways. Interacts with GAB2; involved in signaling downstre
with STAT3; mediates EGFR downstream signaling in cell proliferation. Interacts with RIPK1; in
activation. Interacts (autophosphorylated) with CBL; involved in EGFR ubiquitination and regul
SOCS5; regulates EGFR degradation through TCEB1- and TCEB2-mediated ubiquitination and
degradation. Interacts with PRMT5; methylates EGFR and enhances interaction with PTPN6. In
(phosphorylated) with PTPN6; inhibits EGFR-dependent activation of MAPK/ERK. Interacts wi
regulation of EGF-dependent nuclear transport of EGFR by retrograde trafficking from the Golg
with TNK2; this interaction is dependent on EGF stimulation and kinase activity of EGFR. Inter
positively regulates PCNA. Interacts with PELP1. Interacts with MUC1. Interacts with AP2M1.
May interact with EPS8; mediates EPS8 phosphorylation. Interacts (via SH2 domains) with GRI

Subcellular Location:
Cell membrane; Single-pass type I membrane protein. Endoplasmic reticulum membrane; Single
protein. Golgi apparatus membrane; Single-pass type I membrane protein. Nucleus membrane; S
membrane protein. Endosome. Endosome membrane. Note=In response to EGF, translocated fro
the nucleus via Golgi and ER. Endocytosed upon activation by ligand. Isoform 2: Secreted.

Tissue Specificity:

Ubiquitously expressed. Isoform 2 is also expressed in ovarian cancers.

Post-translational modifications:
Phosphorylation at Ser-695 is partial and occurs only if Thr-693 is phosphorylated. Phosphorylat
Thr-693 by PRKD1 inhibits EGF-induced MAPK8/JNK1 activation. Dephosphorylation by PTP
endocytosis and stabilizes the receptor at the plasma membrane. Autophosphorylation at Tyr-119
methylation at Arg-1199 and enhances interaction with PTPN6. Autophosphorylation at Tyr-109
recruits STAT3.
Monoubiquitinated and polyubiquitinated upon EGF stimulation; which does not affect tyrosine
signaling capacity but may play a role in lysosomal targeting. Polyubiquitin linkage is mainly th
linkage through 'Lys-48', 'Lys-11' and 'Lys-29' also occur.
Methylated. Methylation at Arg-1199 by PRMT5 positively stimulates phosphorylation at Tyr-1

DISEASE:
Defects in EGFR are associated with lung cancer (LNCR) [MIM:211980]. LNCR is a common m
tissues of the lung. The most common form of lung cancer is non-small cell lung cancer (NSCLC
into 3 major histologic subtypes: squamous cell carcinoma, adenocarcinoma, and large cell lung c
diagnosed at an advanced stage and has a poor prognosis.

Similarity:
Belongs to the protein kinase superfamily. Tyr protein kinase family. EGF receptor subfamily.
Contains 1 protein kinase domain.

SWISS:
P00533

Gene ID:
1956

Database links:

Entrez Gene: 407217 Cow

Entrez Gene: 1956 Human

Entrez Gene: 13649 Mouse

Entrez Gene: 24329 Rat

Omim: 131550 Human

SwissProt: P00533 Human

SwissProt: Q01279 Mouse

Unigene: 488293 Human

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Unigene: 420648 Mouse

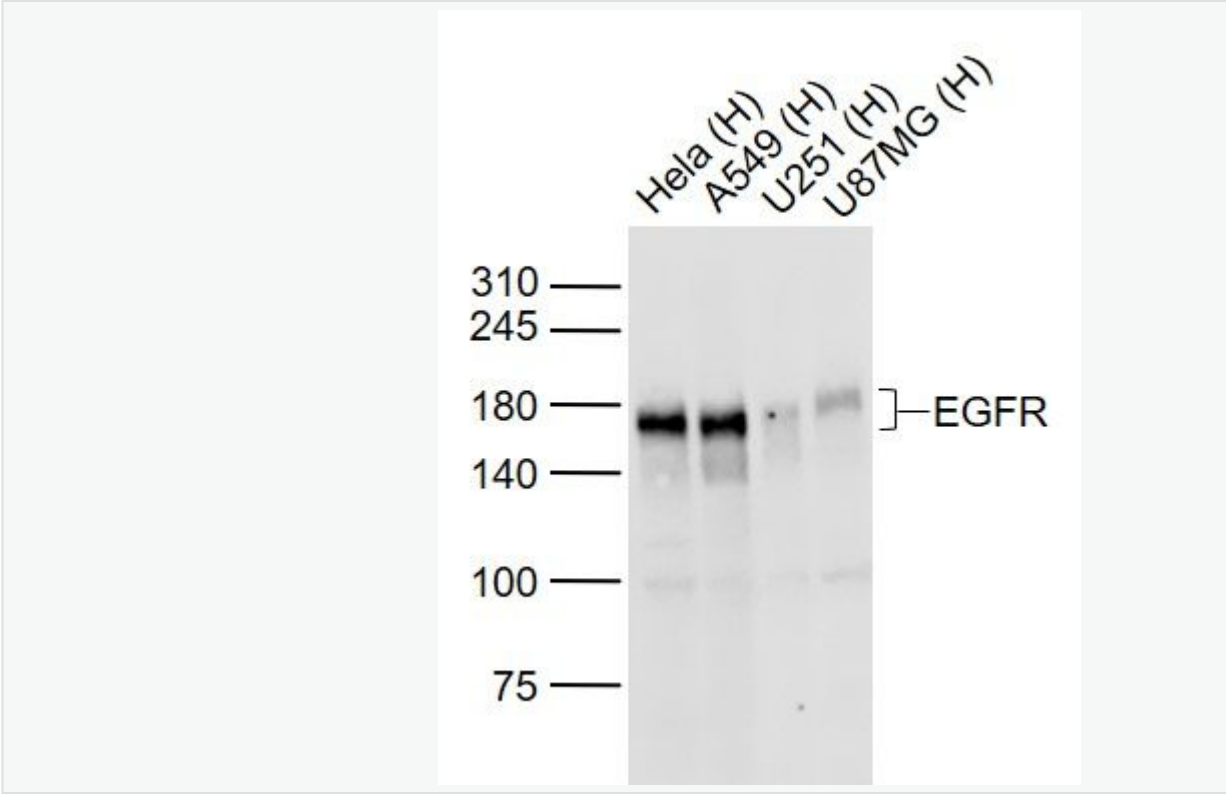
Unigene: 439882 Mouse

Unigene: 8534 Mouse

Unigene: 37227 Rat

The cell membrane 受体（Membrane Receptors)
EGFR-血管内皮生长因子受体 EGFR 是一类分子量为 170kDa 的 glycoprotein，在生长的细
越细胞质膜，表现有蛋白激酶活性。
EGFR 是一种 The cell membrane 受体激酶，对血管内皮生长因子有高度的亲和性，主要功
endothelial cell 生长和血管生成的调控,主要用于各种恶性 Tumour 的研究.
与其配体表皮生长因子或尿抑胃素结合后则被激活，从而启动 DNA 及蛋白质的合成。再
胞中并不存在，但在胃中例外。
大量研究报道显示，EGFR 高表达的 Tumour 生存降低、转移风险增高、预后不良。在很
着 EGFR 表达或过度表达。这些疾病包括：结直肠癌（CRC）、头颈部鳞状细胞癌（SCC
巢癌、宫颈癌、食道癌、胰腺癌、膀胱癌、前列腺癌和非小细胞肺癌等。研究表明，EGF
性程度增高、侵袭性强，这类 Tumour 患者往往生存降低、转移风险增高、预后不良。

Product Picture



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Sample:

Lane 1: Hela (Human) Cell Lysate at 30 ug

Lane 2: A549 (Human) Cell Lysate at 30 ug

Lane 3: U251 (Human) Cell Lysate at 30 ug

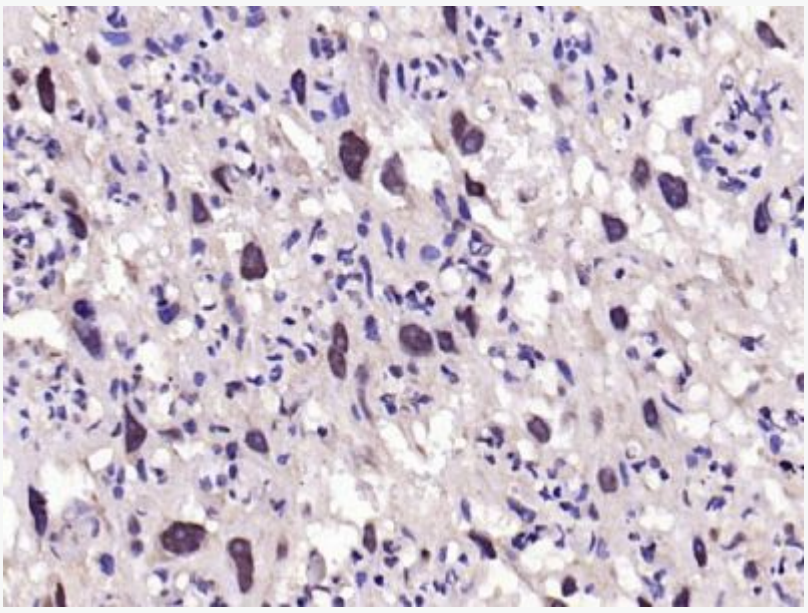
Lane 4: U87MG (Human) Cell Lysate at 30 ug

Primary: Anti-EGFR (SL34018R) at 1/1000 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 170 kD

Observed band size: 170 kD



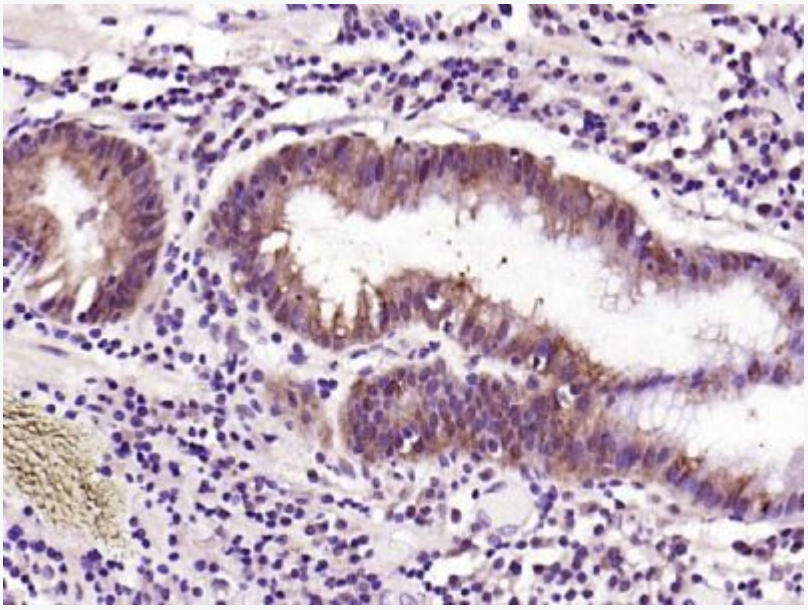
Paraformaldehyde-fixed, paraffin embedded (rat placenta); Antigen retrieval by boiling in sod

(pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; B

(normal goat serum) at 37°C for 30min; Antibody incubation with (EGFR) Polyclonal Antibo

(SL0165R) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0

DAB staining.



Paraformaldehyde-fixed, paraffin embedded (human gastric carcinoma); Antigen retrieval by

citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for

buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (EGFR) Polyclonal

Unconjugated (SL0165R) at 1:200 overnight at 4°C, followed by operating according to SP K

instructionsand DAB staining.

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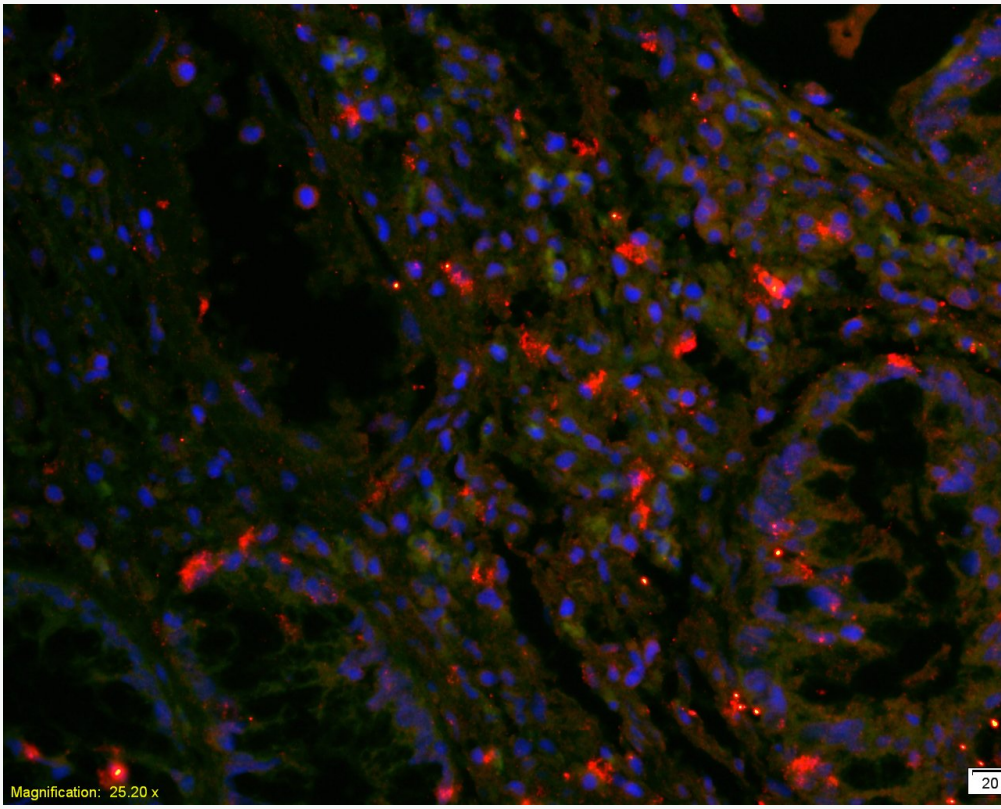

Tissue/cell: human rectal carcinoma;4% Paraformaldehyde-fixed and paraffin-embedded;

Antigen retrieval: citrate buffer (1M, pH 6.0), Boiling bathing for 15min; Blocking buffer (n

serum,C-0005) at 37℃ for 20 min;

Incubation: Anti-EGFR Polyclonal Antibody, Unconjugated(SL0165R) 1:200, overnight at 4°

antibody was Goat Anti-Rabbit IgG, Cy3 conjugated(SL0295G-Cy3)used at 1:200 dilution fo

DAPI(5ug/ml,blue,C-0033) was used to stain the cell nuclei

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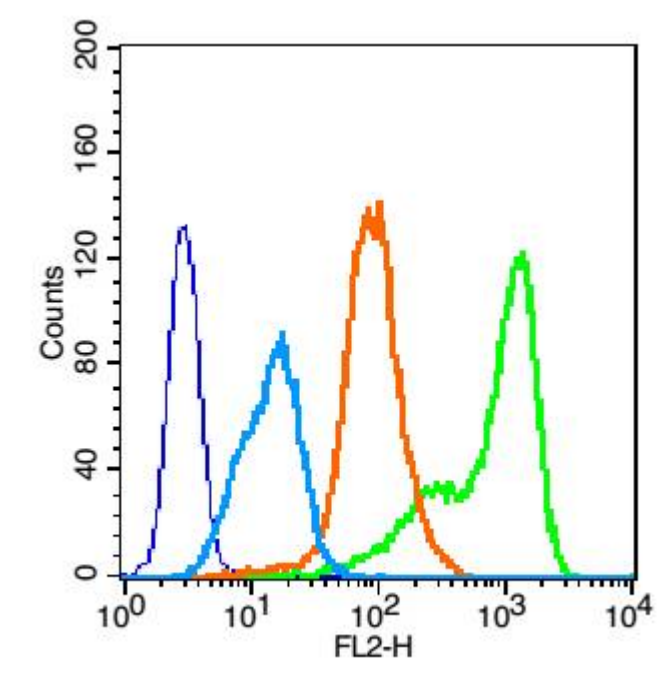


Blank control: HUVEC cells(blue).

Primary Antibody:Rabbit Anti-EGFR antibody(SL0165R), Dilution: 1μg in 100 μL 1X PBS c

Isotype Control Antibody: Rabbit IgG(orange) ,used under the same conditions);

Secondary Antibody: Goat anti-rabbit IgG-PE(white blue), Dilution: 1:200 in 1 X PBS contai

Protocol

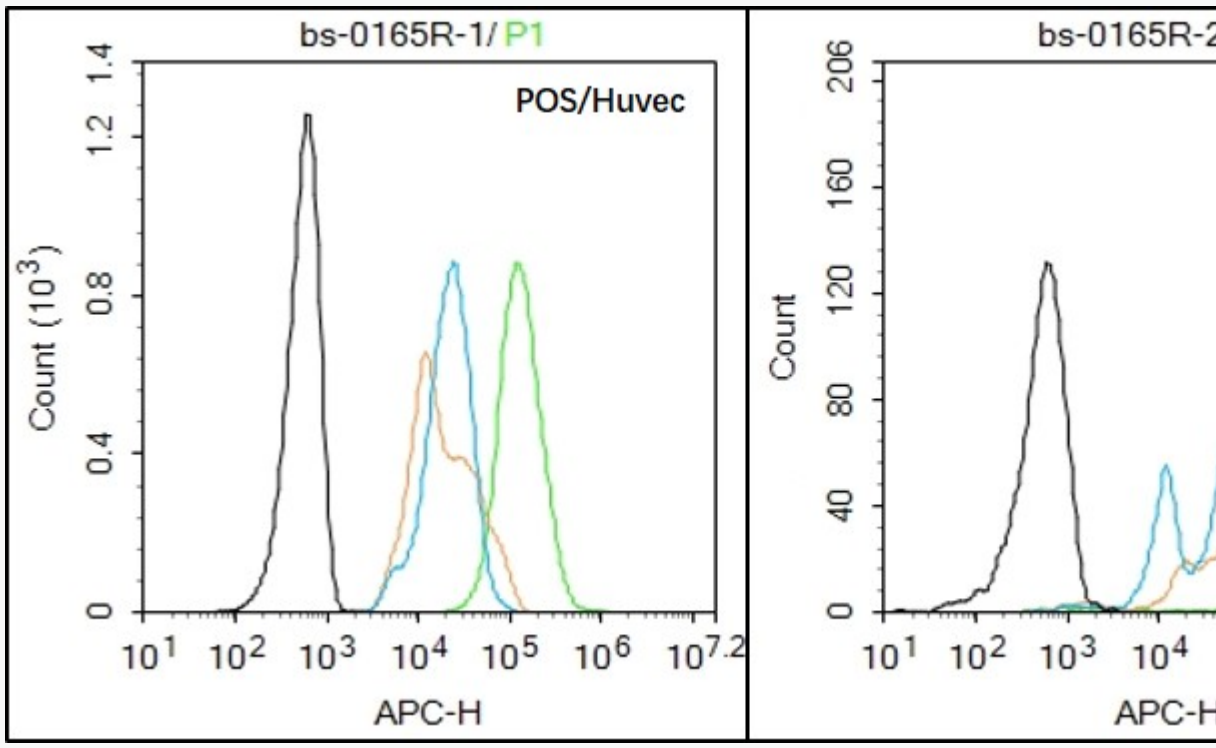
The cells were fixed with 2% paraformaldehyde (10 min) , then permeabilized with 90% ice-c

min on ice. Primary antibody (SL0165R,1μg /1x10^6 cells) were incubated for 30 min on the

PBS containing 0.5% BSA + 10% goat serum (15 min) to block non-specific protein-protein i

Goat Anti-rabbit IgG/PE antibody was added into the blocking buffer mentioned above to rea

antibody at 1/200 dilution for 30 min on ice. Acquisition of 20,000 events was performed.



Black line : Positive blank control (HUVEC); Negative blank control (Molt-4）

Green line : Primary Antibody (Rabbit Anti-EGFR antibody (SL0165R))

Orange line：Isotype Control Antibody (Rabbit IgG) .

Blue line : Secondary Antibody (Goat anti-rabbit IgG-AF647)

HUVEC（Positive）and Molt-4（Negative control）cells (black) were fixed with 4% PFA f

temperature,permeabilized with 90% ice-cold methanol for 20 min at -20℃, and incubated in

buffer for 30 min at room temperature. Cells were then stained with EGFR Antibody(SL0165

blocking buffer and incubated for 30 min at room temperature, washed twice with 2% BSA in

secondary antibody(blue) incubation for 40 min at room temperature. Acquisitions of 20,000 e

performed. Cells stained with primary antibody (green), and isotype control (orange).

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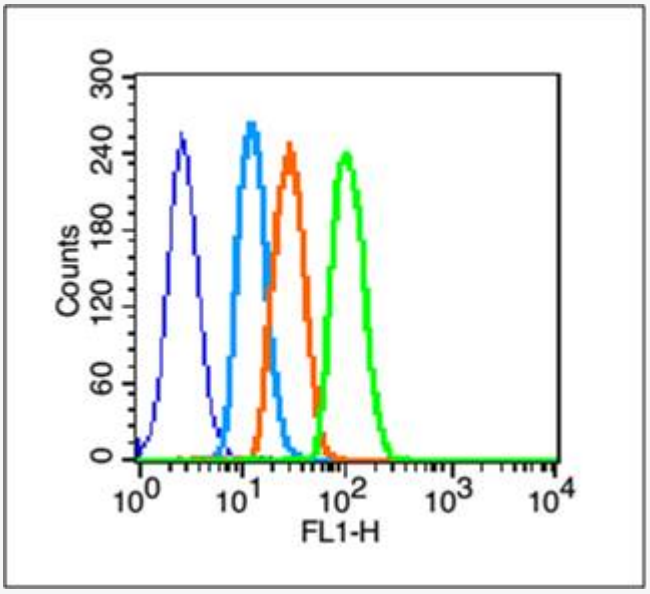

Blank control (blue line): A431 (blue).

Primary Antibody (green line): Rabbit Anti-EGFRantibody (SL0165R)

Dilution: 3µg /10^6 cells;

Isotype Control Antibody (orange line): Rabbit IgG .

Secondary Antibody (white blue line): Goat anti-rabbit IgG-FITC

Dilution: 1µg /test.

Protocol

The cells were fixed with 2% paraformaldehyde (10 min) , then permeabilized with 90% ice-c

min on ice. Cells stained with Primary Antibody for 30 min at room temperature. The cells wer

X PBS/2%BSA/10% goat serum to block non-specific protein-protein interactions followed b

min at room temperature. The secondary antibody used for 40 min at room temperature. Acqu

events was performed.