

## Product datasheet for **RC600001**

### EGFR (NM\_005228) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	EGFR (NM_005228) Human Tagged ORF Clone
Tag:	DDK-His
Symbol:	EGFR
Synonyms:	ERBB; ERBB1; ERRP; HER1; mENA; NISBD2; PIG61
Mammalian Cell Selection:	None
Vector:	pCMV6-XL5-DDK-His (PS100068)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RC600001 representing leader sequence plus the extracellular domain region of NM\_005228

Red=Cloning site Blue=ORF Green=Tags(s)

GTAATACGACTCACTATAGGGCGGCCGGAATTCGTGCGACTGGATCTGGTACCGAGGAGATCCGCCCGCCG  
CGATCGCC

ATGCGACCCTCCGGGACGGCCGGGGCAGCGCTCCTGGCGCTGCTGGCTGCGCTCTGCCCGCGAGTCGGG  
CTCTGGAGGAAAAGAAAGTTTGCCAAGGCACGAGTAACAAGCTCACGCAGTTGGGCACTTTTGAAGATCA  
TTTTCTCAGCCTCCAGAGGATGTTCAATAACTGTGAGGTGGTCTTGGGAATTTGGAAATACCTATGTG  
CAGAGGAATTATGATCTTCTTCTTAAAGACCATCCAGGAGGTGGTGTATGTCTCATTGCCCTCA  
ACACAGTGGAGCGAATTCCTTTGGAAAACCTGCAGATCATCAGAGGAAATATGTACTACGAAAATTCCTA  
TGCCTTAGCAGTCTTATCTAACTATGATGCAAAATAAACCCGGACTGAAGGAGCTGCCCATGAGAAATTA  
CAGGAAATCCTGCATGGCGCCGTGCGGTTACAGCAACAACCCTGCCCTGTGCAACGTGGAGAGCATCCAGT  
GGCGGGACATAGTCAGCAGTGACTTTCTCAGCAACATGTGATGGACTTCCAGAACCACCTGGGCAGCTG  
CCAAAAGTGTGATCCAAGCTGTCCAATGGGAGCTGTGGGGTGCAGGAGAGGAGAACTGCCAGAAACTG  
ACCAAAATCATCTGTGCCAGCAGTGTCCGGGCGCTGCCGTGGCAAGTCCCCCAGTGACTGCTGCCACA  
ACCAGTGTGCTGCAGGCTGCACAGGCCCCCGGGAGAGCGACTGCCTGGTCTGCCGCAAAATCCGAGACGA  
AGCCACGTGCAAGGACACCTGCCCCCACTCATGCTCTACAACCCACCAGTACCAGATGGATGTGAAC  
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ATAAATGCTACGAATATTAACACTTCAAAAACAGTGCACCTCCATCAGTGGCGATCTCCACATCCTGCCG  
TGGCATTAGGGGTGACTCCTTACACATACTCCTCCTCTGGATCCACAGGAACTGGATATTCTGAAAAC  
CGTAAAGGAAATCACAGGTTTTTGTGATTACAGGCTTGGCTGAAAACAGGACGGACCTCCATGCCTTT  
GAGAACCTAGAAATCATACGCGCAGGACCAAGCAACATGGTCAGTTTTCTCTTGACAGTGTGAGCCTGA  
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AAATTTGTGCTATGCAAAACAATAAACTGGAAAAACTGTTGGGACCTCCGGTCCAGAAAACAAAATT  
ATAAGCAACAGAGGTGAAAACAGCTGCAAGGCCACAGGCCAGTCTGCCATGCCTTGTGCTCCCCGAGG  
GCTGCTGGGGCCCGAGCCAGGACTGCGTCTTGGCCGAATGTGAGCCGAGGACGGGAATGCGTGGA  
CAAGTGAACCTTCTGGAGGGTGAAGCAAGGGAGTTTGTGGAGAACTCTGAGTGCATACAGTGCACCCA  
GAGTGCCTGCCTCAGGCCATGAACATCACCTGCACAGGACGGGGACCAGCAACTGTATCCAGTGTGCC  
ACTACATTGACGGCCCCCACTGCGTCAAGACCTGCCCGGCAGGAGTCTGGGAGAAAACAACACCCTGGT  
CTGGAAGTACGCAGACGGCCGATGTGTGCCACCTGTGCCATCCAACCTGCACCTACGGATGCACTGGG  
CCAGGTCTTGAAGGCTGTCCAACGAATGGGCCTAAGATCCCGTCC

ACGCGTTCAGGCGACTACAAGGATGACGACGATAAGGGATCTCATCATCACCATCACCATTAATGAGATC  
TGGTACCGATATCAAGCTTGTGCGACTCTAGA

**Protein Sequence:** >RC600001 representing signal peptide plus the extracellular domain region of NM\_005228  
 Red=Cloning sites Green= DDK and 6XHIS Tags

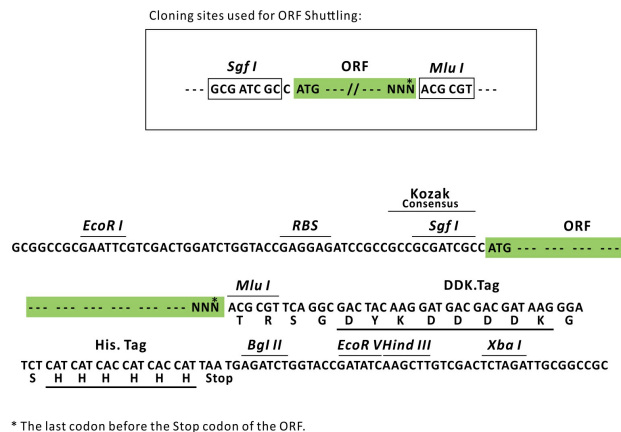
MRPSGTAGAALLALLAALCPASRALEEKKVCQGTSNKL TQLGTFEDHFLSLQRMFNCEVVLGNLEITYV  
 QRNYDLSFLKTIQEVAGYVLIALNTVERIPLNLQIIRGNMYYENSYALAVLSNYDANKTGLKELPMRNL  
 QEILHGAVRFSNNPALCNVESIQWRDIVSSDFLSNMSMDFQNHLGSCQKCDPSCPNGSCWGAGEENCQKL  
 TKIICAQQCSGRCRGKSPSDCCHNQCAAGCTGPRESDECLVCRKFRDEATCKDTCPLMLYNPTTYQMDVN  
 PEGKYSFGATCVKKCPRNYVVDHGSVCVRACGADSYEMEEDGVRKCKKCEGPCRKVCNGIGIGEFKDSLS  
 INATNIKHFKNCTISGDLHILPVAFRGDSFHTPPPLDPQELDILKTVKEITGFLLIQAWPENRTDLHAF  
 ENLEIIRGRKQHGQFSLAVVSLNITSLGLRSLKEISDGDVVIISGNKNLCYANTINWKKLFGTSGQKTKI  
 ISNRGENSCKATGQVCHALCSPEGCWGPEPRDCVSCRNVSRGRCVDCNLLLEGEPREFVNSECIQCHP  
 ECLPQAMNITCTGRGPDNCIQCAHYIDGPHCVKTCPAGVMGENNTLVWKYADAGHVCHLCHPNCTYGCTG  
 PGLEGCPTNGPKIPS

TRSGTRSGDYKDDDDKGSHHHHHH

**Chromatograms:** [https://cdn.origene.com/chromatograms/ja2306\\_f02.zip](https://cdn.origene.com/chromatograms/ja2306_f02.zip)

**Restriction Sites:** Sgfl-MluI

**Cloning Scheme:**



**ACCN:** NM\_005228

**ORF Size:** 3800 bp

**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

**OTI Annotation:** This clone was engineered to express the extra cellular domain of the protein with an expression tag. Expression varies depending on the nature of the gene.

<b>Components:</b>	The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.</li></ol>
<b>Note:</b>	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
<b>RefSeq:</b>	<a href="#">NM_005228.3</a> , <a href="#">NP_005219.2</a>
<b>RefSeq Size:</b>	5616 bp
<b>RefSeq ORF:</b>	3633 bp
<b>Locus ID:</b>	1956
<b>UniProt ID:</b>	<a href="#">P00533</a>
<b>Cytogenetics:</b>	7p11.2
<b>Domains:</b>	Recep_L_domain, pkinase, TyrKc, S_TKc, Furin-like, FU
<b>Protein Families:</b>	Adult stem cells, Cancer stem cells, Druggable Genome, ES Cell Differentiation/IPS, Protein Kinase, Secreted Protein, Stem cell relevant signaling - JAK/STAT signaling pathway, Transmembrane
<b>Protein Pathways:</b>	Adherens junction, Bladder cancer, Calcium signaling pathway, Colorectal cancer, Cytokine-cytokine receptor interaction, Dorso-ventral axis formation, Endocytosis, Endometrial cancer, Epithelial cell signaling in Helicobacter pylori infection, ErbB signaling pathway, Focal adhesion, Gap junction, Glioma, GnRH signaling pathway, MAPK signaling pathway, Melanoma, Non-small cell lung cancer, Pancreatic cancer, Pathways in cancer, Prostate cancer, Regulation of actin cytoskeleton
<b>MW:</b>	70.9 kDa
<b>Gene Summary:</b>	The protein encoded by this gene is a transmembrane glycoprotein that is a member of the protein kinase superfamily. This protein is a receptor for members of the epidermal growth factor family. EGFR is a cell surface protein that binds to epidermal growth factor, thus inducing receptor dimerization and tyrosine autophosphorylation leading to cell proliferation. Mutations in this gene are associated with lung cancer. EGFR is a component of the cytokine storm which contributes to a severe form of Coronavirus Disease 2019 (COVID-19) resulting from infection with severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2). [provided by RefSeq, Jul 2020]