

Product datasheet for **RC600002**

EGFR (NM_201282) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	EGFR (NM_201282) 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:**

>RC600002 representing leader sequence plus the extracellular domain region of NM_201282

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

GTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCTGGTACCGAGGAGATCCGCCGCCG
CGATCGCC

ATGCGACCCTCCGGGACGGCCGGGGCAGCGCTCCTGGCGCTGCTGGCTGCGCTCTGCCCGGCGAGTCGGG
CTCTGGAGGAAAAGAAAGTTTGCCAAGGCACGAGTAACAAGCTCACGCAGTTGGGCACTTTGAAGATCA
TTTTCTCAGCCTCCAGAGGATGTTCAATAACTGTGAGGTGGTCTTGGGAATTTGGAAATTACCTATGTG
CAGAGGAATTATGATCTTTCTTCTTAAAGACCATCCAGGAGGTGGTGGTTATGTCCTCATTGCCCTCA
ACACAGTGGAGCGAATTCCTTTGGAAAACCTGCAGATCATCAGAGGAAATATGTACTACGAAAATTCCTA
TGCCTTAGCAGTCTTATCTAACTATGATGCAAAATAAACCGGACTGAAGGAGCTGCCCATGAGAAATTTA
CAGGAAATCCTGCATGGCGCCGTGCGGTTCAAGCAACACCTGCCCTGTGCAACGTGGAGAGCATCCAGT
GGCGGGACATAGTCAGCAGTGACTTTCTCAGCAACATGTCGATGGACTCCAGAACACCTGGGCAGCTG
CCAAAAGTGTGATCCAAGCTGTCCAATGGGAGCTGCTGGGGTGCAAGAGAGGAGAACTGCCAGAACTG
ACCAAAATCATCTGTGCCAGCAGTGCTCCGGGCGCTGCCGTGGCAAGTCCCCCAGTGACTGCTGCCACA
ACCAAGTGTGCTGCAGGCTGCACAGGCCCGGGGAGAGCGACTGCCTGGTCTGCCGCAAAATCCGAGACGA
AGCCACGTGCAAGGACACCTGCCCCCACTCATGCTCTACAACCCACCAGTACCAGATGGATGTGAAC
CCCAGGGGCAAAATACAGCTTTGGTGCCACCTGCGTGAAGAAGTGTCCCGTAATTATGTGGTGACAGATC
ACGGCTCGTGCGTCCGAGCCTGTGGGGCCGACAGCTATGAGATGGAGGAAGACGGCGTCCGAAGTGTA
GAAGTGCGAAGGGCCTTGCCGCAAGTGTGAACGGAATAGGTATTGGTGAATTTAAAGACTCACTCTCC
ATAAATGCTACGAATATTAACACTTCAAAACTGCACCTCCATCAGTGGCGATCTCCACATCCTGCCGG
TGGCATTTAGGGGTGACTCCTTCACACATACTCCTCCTCTGGATCCACAGGAAGTGGATATTCTGAAAAC
CGTAAAGGAAATCACAGGGTTTTTGTGATTAGGCTTGGCTGAAAACAGGACGACCTCCATGCCTTT
GAGAACCTAGAAATCATACGCGGCAGGACCAAGCAACATGGTCAGTTTTCTCTTGACGTCGTGAGCCTGA
ACATAACATCCTTGGGATTACGCTCCCTCAAGGAGATAAGTGTGGAGATGTGATAATTTAGGAAACAA
AAATTTGTGCTATGCAATACAATAAACTGAAAAAACTGTTGGGACCTCCGGTCAGAAAACCAAAATT
ATAAGCAACAGAGGTGAAAACAGCTGCAAGGCCACAGGCCAGGTCTGCCATGCCTTGTGCTCCCCGAGG
GCTGCTGGGGCCCGAGCCAGGACTGCGTCTCTTGCCGAATGTCAGCCGAGGCAGGGAATGCGTGGA
CAAGTGAACCTTCTGGAGGGTGAGCAAGGGAGTTTGTGGAGAACTCTGAGTGCATACAGTGCCACCCA
GAGTGCCTGCCTCAGGCCATGAACATCACCTGCACAGGACGGGGACCAGACAAGTATCCAGTGTGCC
ACTACATTGACGGCCCCCACTGCGTCAAGACCTGCCCGGCAGGAGTCATGGGAGAAAACAACACCTGGT
CTGGAAGTACGCAGACGCCGGCCATGTGTGCCACCTGTGCCATCCAACTGCACCTACGGGTCC

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TGGTACCGATATCAAGCTTGTGACTCTAGA

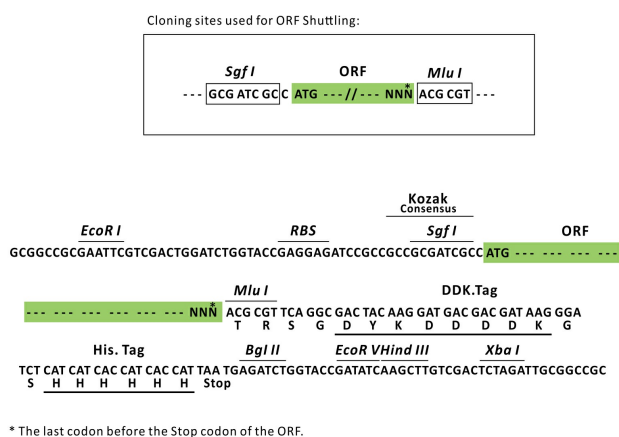
Protein Sequence: >RC600002 representing signal peptide plus the extracellular domain region of NM_201282
Red=Cloning sites Green= DDK and 6XHIS Tags

MRPSGTAGAALLALLAALCPASRALEEKVKCQGTSNKL TQLGTFEDHFLSLQRMFNNECVVLGNLEITYV
QRNYDLSFLKTIQEVAGYVLIALNTVERIPLNLQIIRGNMYENSYALAVLSNYDANKTGLKELPMRN
QEILHGAVRFSNNPALCNVESIQWRDIVSSDFLSNMSMDFQNHLGSCQKCDPSCPNGSCWGAGEENCQKL
TKIIICAQQCSGRCRGKSPSDCHNQCAAGCTGPRESCLVCRKFRDEATCKDTCPLMLYNPTTYQMDVN
PEGKYSFGATCVKKCPRNYVVDHGSVCVRACGADSYEMEEDGVRKCKKCEGPCRKVCNGIGIGEFKDSL
INATNIKHFNCTSIISGLHILPVAFRGDSFTHTPPLDPQELDILKTVKEITGFLLIQAWPENRTDLHAF
ENLEIIRGRTKQHGGFSLAVVSLNITSLGLRSLKEISDGVIIISGNKNLCYANTINWKKLFGTSGQKTKI
ISNRGENSCKATGQVCHALCSPEGCWGPEPRDCVSCRNVSRGRCVDKCNLLEGEPRFVENSECIQCHP
ECLPOAMNITCTGRPDNCIOCAHYIDGPHCVKTCPAGVMGENNTLVWKYADAGHVCHLCHPNCTYGS

TRSGTRSGDYKDDDDKGSHHHHH

Restriction Sites: Sgfl-MluI

Cloning Scheme:



ACCN: NM 201282

ORF Size: 3698 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.

Components: 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).

Reconstitution Method:	1. Centrifuge at 5,000xg for 5min. 2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA. 3. Close the tube and incubate for 10 minutes at room temperature. 4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom. 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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	<u>NM_201282.1, NP_958439.1</u>
RefSeq Size:	2239 bp
RefSeq ORF:	1887 bp
Locus ID:	1956
UniProt ID:	<u>P00533</u>
Cytogenetics:	7p11.2
Protein Families:	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
Protein Pathways:	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
MW:	69.2 kDa
Gene Summary:	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]