

## Product datasheet for **RC400318**

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

#### Product data:

Product Type:	Mutant ORF Clones
Product Name:	EGFR (NM_005228) Human Mutant ORF Clone
Mutation Description:	H773_V774insH
Affected Codon#:	773
Affected NT#:	c.2319_2320
Nucleotide Mutation:	EGFR Mutant (H773_V774insH), Myc-DDK-tagged ORF clone of Homo sapiens epidermal growth factor receptor (EGFR), transcript variant 1 as transfection-ready DNA
Effect:	Insertion
Symbol:	EGFR
Synonyms:	ERBB; ERBB1; ERRP; HER1; mENA; NISBD2; PIG61
E. coli Selection:	Kanamycin (25 ug/mL)
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
Tag:	Myc-DDK
ACCN:	NM_005228
ORF Size:	3633 bp
Restriction Sites:	Sgfl-MluI
ORF Nucleotide Sequence:	>RC400318 representing NM_005228 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**GCGATCGCC**

ATGCGACCCTCCGGGACGGCCGGGCGAGCGCTCCTGGCGCTGCTGGCTGCGCTCTGCCCGCGAGTCGGG  
CTCTGGAGGAAAAGAAAGTTTGCCAAGGCACGAGTAACAAGCTCACGCAGTTGGGCACTTTGAAGATCA  
TTTTCTCAGCCTCAGAGGATGTTCAATAACTGTGAGGTGGTCTTGGGAATTTGGAAATTACCTATGTG  
CAGAGGAATTATGATCTTCTCTTAAAGACCATCCAGGAGGTGGTGTATGTCTCATTGCCCTCA  
ACACAGTGGAGCGAATTCCTTTGAAAACCTGCAGATCATCAGAGGAAATATGTACTACGAAAATTCCTA  
TGCCCTTAGCAGTCTTATCTAACTATGATGCAAATAAACCGGACTGAAGGAGCTGCCCATGAGAAATTA  
CAGGAAATCCTGCATGGCGCCGTGCGGTTACAGCAACAACCTGCCCTGTGCAACGTGGAGAGCATCCAGT



[View online »](#)

GGCGGGACATAGTCAGCAGTGACTTTCTCAGCAACATGTCGATGGACTTCCAGAACCACCTGGGCAGCTG  
CCAAAAGTGTGATCCAAGCTGTCCCAATGGGAGCTGCTGGGGTGCAGGAGAGGAGAACTGCCAGAACTG  
ACCAAAATCATCTGTGCCAGCAGTGCTCCGGGCGCTGCCGTGGCAAGTCCCCAGTGACTGCTGCCACA  
ACCAGTGTGCTGCAGGCTGCACAGGCCCCGGGAGAGCGACTGCCTGGTCTGCCGCAAATCCGAGACGA  
AGCCACGTGCAAGGACACCTGCCCCCACTCATGCTCTACAACCCACCACGTACCAGATGGATGTGAAC  
CCCGAGGGCAAATACAGCTTTGGTGCCACCTGCGTGAAGAAGTGTCCCCGTAATTATGTGGTGACAGATC  
ACGGCTCGTGCCTCCGAGCCTGTGGGGCCGACAGCTATGAGATGGAGGAAGACGGGCTCCGCAAGTAA  
GAAGTCCGAAGGGCCTTGCCGCAAAGTGTGAACGGAATAGGTATTGGTGAATTTAAAGACTCACTCTCC  
ATAAATGCTACGAATATTAACACTTCAAAAACCTGCACCTCCATCAGTGCGGATCTCCACATCCTGCCGG  
TGGCATTAGGGGTGACTCCTTACACATACTCCTCCTCTGGATCCACAGGAACTGGATATTCTGAAAAAC  
CGTAAAGGAAATCACAGGGTTTTGCTGATTAGGCTTGGCTGAAAACAGGACGGACCTCCATGCCTTT  
GAGAACCTAGAAATCATACGCGGCAGGACCAAGCAACATGGTCAGTTTTCTTTCAGTGCCTGACCTGA  
ACATAACATCCTTGGATTACGCTCCCTCAAGGAGATAAGTGATGGAGATGTGATAATTTACAGAAACAA  
AAATTTGTCTATGCAAATACAATAAACTGAAAAAACTGTTGGACCTCCGGTCCAGAAAACAAAATT  
ATAAGCAACAGAGGTGAAAACAGCTGCAAGGCCACAGGCCAGGTCTGCCATGCCTTGTGCTCCCCGAGG  
GCTGCTGGGGCCCGAGCCAGGACTGCGTCTTGGCCGAATGTCAGCCGAGGAGGGAATGCGTGGA  
CAAGTGC AACCTTCTGGAGGGTGAAGCAAGGGAGTTTGTGGAGA ACTCTGAGTGCATACAGTGCCACCCA  
GAGTGCCTGCCTCAGGCCATGAACATCACCTGCACAGGACGGGGACCAGACA ACTGTATCCAGTGTGCC  
ACTACATTGACGGCCCCACTGCGTCAAGACCTGCCCGGAGGAGTCA TGGGAGAAAAACAACACCCTGGT  
CTGGAAGTACGCAGACGCCGGCCATGTGTGCCACCTGTGCCATCCAACTGCACCTACGGATGACTGGG  
CCAGGTCTTGAAGGCTGTCCAACGAATGGGCCTAAGATCCCGTCCATCGCCACTGGGATGGTGGGGGCC  
TCCTCTTGCTGCTGGTGGTGGCCTGGGATCGGCCTTTCATGCGAAGGCGCCACATGTTTCGGAAGCC  
CACGTGCGGAGGCTGCTGCAGGAGAGGGAGCTTGTGGAGCCTTTACACCCAGTGGAGAAGTCCCAAC  
CAAGCTCTTTGAGGATCTTGAAGGAACTGAATTCAAAAGATCAAAGTGTGGGCTCCGGTGCCTTCG  
GCACGGTGATAAAGGACTCTGGATCCCAAGAGTGAAGAAATTTAAATTTCCCGTCGCTATCAAGGAATT  
AAGAGAAGCAACATCTCCGAAAGCAACAAAGGAAATCCTCGATGAAGCCTACGTGATGGCCAGCGTGGAC  
AACCCCCACACCGTGTGCCGCTGCTGGGCATCTGCCTCACCTCCACCGTGCAGCTCATCACGCAGCTCA  
TGCCCTTCGGCTGCCTCCTGGACTATGTCCGGAAACACAAAGACAATATTGGCTCCAGTACCTGCTCAA  
CTGGTGTGTGCAGATCGCAAAGGCATGAACTACTTGGAGGACCGTGCCTTGGTGCACCCGACCTGGCA  
GCCAGGAACGTACTGGTAAAACACCGCAGCATGTCAAGATCACAGATTTTGGGTGGCCAACTGCTGG  
GTGCGGAAGAGAAAGAATACCATGCAGAAGGAGGCAAAGTGCCTATCAAGTGGATGGCATTGGAATCAAT  
TTTACACAGAATCTATACCCACCAGAGTGTGCTGGAGCTACGGGGTGACCGTTTGGGAGTTGATGACC  
TTTGGATCCAAGCCATATGACGGAATCCCTGCCAGCGAGATCTCCTCCATCCTGGAGAAAGGAGAAGCC  
TCCCTCAGCCACCATATGTACCATCGATGTCTACATGATCATGGTCAAGTGTGGATGATAGACGCAGA  
TAGTCGCCCAAAGTTCCTGTGAGTTGATCATCGAATTTCCAAAATGGCCCGAGACCCCGAGCGCTACCTT  
GTCATTCAGGGGGATGAAAGAATGCATTTGCCAAGTCTACAGACTCCA ACTTCTACCGTGCCTGATGG  
ATGAAGAAGACATGGACGACGTGGTGGATGCCGACGAGTACCTCATCCCACAGCAGGGCTTCTTCAGCAG  
CCCCTCCACGTACGGACTCCCCTCTGAGCTCTCTGAGTGAACAGCAACAATTCACCGTGGCTTGC  
ATTGATAGAAAATGGCTGCAAAGCTGTCCCATCAAGGAAGACAGCTTCTTGACGCGATACAGCTCAGACC  
CCACAGGCGCCTTGACTGAGGACAGCATAGACGACACCTTCTCCAGTGCCTGAATACATAAACACAGTC  
CGTTCCAAAAGGCCGCTGGCTCTGTGCAAGTCTGTCTATACAATCAGCCTCTGAACCCCGCGCCC  
AGCAGAGACCCACACTACCAGGACCCCCACAGCACTGCAGTGGGCAACCCGAGTATCTCAACACTGTCC  
AGCCACCTGTGTCAACAGCACATTCGACAGCCCTGCCACTGGGCCAGAAAGGAGCCACCAAATTAG  
CCTGGACAACCTGACTACCAGCAGGACTTCTTTCCAAAGGAAGCAAGCCAAATGGCATCTTTAAGGGC  
TCCACAGTGA AAAATGCAGAATACCTAAGGGTGCGCCACAAAGCAGTGAATTTATTGGAGCA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC400318 representing NM\_005228  
 Red=Cloning site Green=Tags(s)

MRPSGTAGAALLALLAALCPASRALEEKKVCQGTSNKL TQLGTFEDHFLSLQRMFNCEVVLGNLEITYV  
 QRNYDL SFLKTIQEVAGYVLI ALNTVERIPL ENLQIIRGNMYYENSYALAVLSNYDANKTGLKELPMRNL  
 QEILHGAVRFSNNPALCNVESIQWRDIVSSDFLSNMSMDFQNHLGSCQKCDPSCPNWSCWGAGEENCQKL  
 TKIICAQQCSGRCRGKSPSDCCNHQCAAGCTGPRESDECLVCRKFRDEATCKDTCPPMLLYNPPTYQMDVN  
 PEGKYSFGATCVKKCPRNYVVDHGGSCVRACGADSYEMEEDGVRKCKKCEGPCRKVCNGIGIGEFKDSLS  
 INATNIKHFKNCTSSISGDLHILPVAFRGDSFHTHTPPLDPQELDILKTVKEITGFLLIQAWPENRDLHAF  
 ENLEIIRGRKQHGQFSLAVVSLNITSLGLRSLKEISDGDVVIISGNKNLCYANTINWKKLFGTSGQKTKI  
 ISNRGENSCKATGQVCHALCSPEGCWGPPEPRDCVSCRNVSRGECVDKCNLLEGEPRFVENSECIQCHP  
 ECLPQAMNITCTGRGPDNCIQCAHYIDGPHCVKTCPAGVMGENNTLVWKYADAGHVCHLCHPNCTYGCTG  
 PGLEGCP TNGPKIPSIATGMV GALLLLL VVALGIGLFMRRRHIVRKRTLRRLLQERELVEPLTPSGEAPN  
 QALLRILKETEFKKIKVLGSGAFGTVYKGLWIPEGEKVKIPVAIKELREATSPKANKEILDEAYMASVD  
 NPHTVCRLLGICLTSTVQLITQLMPFGCLLDYVREHKDNIGSQYLLNWCVQIAKGMNYLED RRLVHRDLA  
 ARNVLVKTPQHVKITDFGLAKLLGAEKEYHAEGGKVPKWMAL ESILHRIYTHQSDVWSYGVTWVWELMT  
 FGSKPYDGIPASEISSILEKGERLPQPPICTIDVYMIMVKCWMIDADSRPKFRELIEFSKMARDPQRYL  
 VIQGDERMHLPSPTDSNFYRALMDEEDMDVVDAD EYLIPQQGFFSSPSTSRTPLLSLATSNNSTVAC  
 IDRNLQSCPIKEDSFLQRYSSDPTGALTEDSIDD TFLPVEYINQSVPKRPAQSVQNPVYHNQPLNPAP  
 SRDPHYQDPHSTAVGNPEYLN TVQPTCVNSTFDSPA HWAQKGS HQISLDNPDYQQDFFPK EAKPNGIFKG  
 STAENAEYLRVAPQSSEFIGA

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** /chromatograms/ja2423\_g08.zip

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



<b>OTI Disclaimer:</b>	<p>Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at <a href="mailto:custsupport@origene.com">custsupport@origene.com</a> or by calling 301.340.3188 option 3 for pricing and delivery.</p> <p>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. <a href="#">More info</a></p>
<b>OTI Annotation:</b>	<p>This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.</p>
<b>Components:</b>	<p>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).</p>
<b>RefSeq:</b>	<p><a href="#">NP_005219</a></p>
<b>RefSeq Size:</b>	<p>5616 bp</p>
<b>RefSeq ORF:</b>	<p>3633 bp</p>
<b>Locus ID:</b>	<p>1956</p>
<b>Cytogenetics:</b>	<p>7p11.2</p>
<b>Domains:</b>	<p>Recep_L domain, pkinase, TyrKc, S_TKc, Furin-like, FU</p>
<b>Protein Families:</b>	<p>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</p>
<b>Protein Pathways:</b>	<p>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</p>
<b>MW:</b>	<p>134 kDa</p>

**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]