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Product datasheet for RC400297

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:	G719S
Affected Codon#:	719
Affected NT#:	c.2155
Nucleotide Mutation:	EGFR Mutant (G719S), Myc-DDK-tagged ORF clone of Homo sapiens epidermal growth factor receptor (EGFR), transcript variant 1 as transfection-ready DNA
Effect:	Missense
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:	3630 bp
Restriction Sites:	SgfI-MluI
ORF Nucleotide Sequence:	>RC400297 representing NM_005228 Red=Cloning site Blue=ORF Green=Tags(s) TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC GCCGCGATCGCC ATGCGACCCTCCGGGACGGCCGGGGCAGCGCTCCTGGCGCTGCTGGCTGCGCTCTGCCCGGCGAGTCGGG CTCTGGAGGAAAAGAAAGTTTGCCAAGGCACGAGTAACAAGCTCACGCAGTTGGGCACTTTTGAAGATCA TTTTCTCAGCCTCCAGAGGATGTTCAATAACTGTGAGGTGGTCCTTGGGAATTTGGAAATTACCTATGTG CAGAGGAATTATGATCTTTCCTTCTTAAAGACCATCCAGGAGGTGGCTGGTTATGTCCTCATTGCCCTCA ACACAGTGGAGCGAATTCCTTTGGAAAACCTGCAGATCATCAGAGGAAATATGTACTACGAAAATTCCTA TGCCTTAGCAGTCTTATCTAACTATGATGCAAATAAAACCGGACTGAAGGAGCTGCCCATGAGAAATTTA CAGGAAATCCTGCATGGCGCCGTGCGGTTCAGCAACAACCCTGCCCTGTGCAACGTGGAGAGCATCCAGT

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ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC400297 representing NM_005228
Red=Cloning site Green=Tags(s)

MRPSGTAGAALLALLAALCPASRALEEKKVCQGTSNKLTQLGTFEDHFLSLQRMFNNCEVVLGNLEITYV
QRNYDLSFLKTIQEVAGYVLIALNTVERIPLENLQIIRGNMYYENSYALAVLSNYDANKTGLKELPMRNL
QEILHGAVRFSNNPALCNVESIQWRDIVSSDFLSNMSMDFQNHLGSCQKCDPSCPNGSCWGAGEENCQKL
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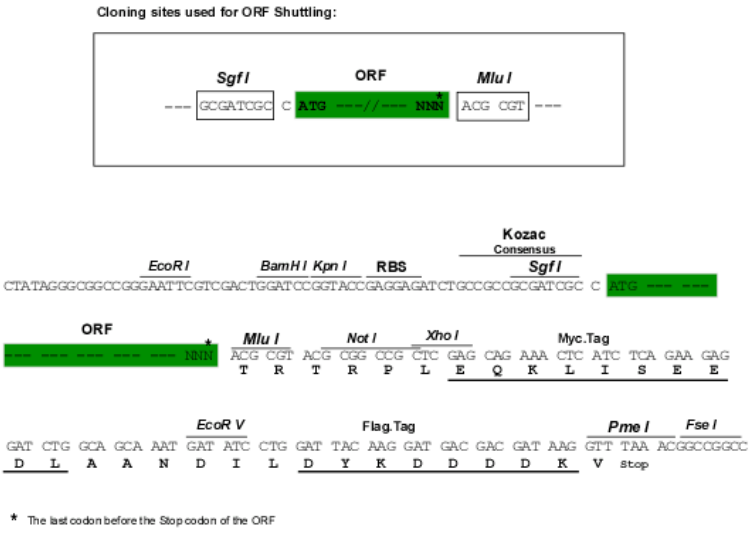
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:



OTI Disclaimer:	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 custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery. 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 complete ORF 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).
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	NP_005219
RefSeq Size:	5616 bp
RefSeq ORF:	3633 bp
Locus ID:	1956
Cytogenetics:	7p11.2
Domains:	Recep_L_domain, pkinase, TyrKc, S_TKc, Furin-like, FU
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:	134 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]