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Product datasheet for RG209888

PRKAG2 (NM_024429) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PRKAG2 (NM_024429) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	PRKAG2
Synonyms:	AAKG; AAKG2; CMH6; H91620p; WPWS
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)

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ORF Nucleotide Sequence:

>RG209888 representing NM_024429
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGCCGCTCCTGGACGGAGACCTGGAGGGTTCCGGAAAGCATTCCTCTCGAAAGGTGGACAGCCCCTTCG
GCCCGGGCAGCCCCTCCAAAGGGTTCTTCTCCAGAGGCCCCCAGCCCCGGCCCTCCAGCCCCATGTCTGC
ACCTGTGAGGCCCAAGACCAGCCCCGGCTCTCCCAAAACCGTGTTCCCGTTCTCCTACCAGGAGTCCCCG
CCACGCTCCCCTCGACGCATGAGCTTCAGTGGGATCTTCCGCTCCTCCTCCAAAGAGTCTTCCCCCAACT
CCAACCCTGCTACCTCGCCCGGGGGCATCAGGTTTTTCTCCCGCTCCAGAAAAACCTCCGGCCTCTCCTC
CTCTCCGTCAACACCCACCCAAGTGACCAAGCAGCACACGTTTCCCCTGGAATCCTATAAGCACGAGCCT
GAACGGTTAGAGAATCGCATCTATGCCTCGTCTTCCCCCCCAGACACAGGGCAGAGGTTCTGCCCGTCTT
CCTTCCAGAGCCCGACCAGGCCTCCACTGGCATCACCGACACACTATGCTCCCTCCAAAGCCGCGGCGCT
GGCGGCGGCCCTGGGACCCGCGGAAGCCGGCATGCTGGAGAAGCTGGAGTTCGAGGACGAAGCAGTAGAA
GACTCAGAAAGTGGTGTTTACATGCGATTCATGAGGTCACACAAGTGTTATGACATCGTTCCAACCAGTT
CAAAGCTTGTTGTCTTTGATACTACATTACAAGTTAAAAAGGCCTTCTTTGCTTTGGTAGCCAACGGTGT
CAGAGCAGCGCCACTGTGGGAGAGTAAAAAACAAAGTTTTGTAGGAATGCTAACAATTACAGATTTCATA
AATATACTACATAGATACTATAAATCACCTATGGTACAGATTTATGAATTAGAGGAACATAAAATTGAAA
CATGGAGGGAGCTTTATTTACAAGAAACATTTAAGCCTTTAGTGAATATATCTCCAGATGCAAGCCTCTT
CGATGCTGTATACTCCTTGATCAAAAATAAAATCCACAGATTGCCCGTTATTGACCCTATCAGTGGGAAT
GCACTTTATATACTTACCCACAAAAGAATCCTCAAGTTCCTCCAGCTTTTTATGTCTGATATGCCAAAGC
CTGCCTTCATGAAGCAGAACCTGGATGAGCTTGGAATAGGAACGTACCACAACATTGCCTTCATACATCC
AGACACTCCCATCATCAAAGCCTTGAACATATTTGTGGAAAGACGAATATCAGCTCTGCCTGTTGTGGAT
GAGTCAGGAAAAGTTGTAGATATTTATTCCAAATTTGATGTAATTAATCTTGCTGCTGAGAAAACATACA
ATAACCTAGATATCACGGTGACCCAGGCCCTTCAGCACCGTTCACAGTATTTTGAAGGTGTTGTGAAGTG
CAATAAGCTGGAAATACTGGAGACCATCGTGGACAGAATAGTAAGAGCTGAGGTCCATCGGCTGGTGGTG
GTAAATGAAGCAGATAGTATTGTGGGTATTATTTCCCTGTCGGACATTCTGCAAGCCCTGATCCTCACAC
CAGCAGGTGCCAAACAAAAGGAGACAGAAACGGAG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

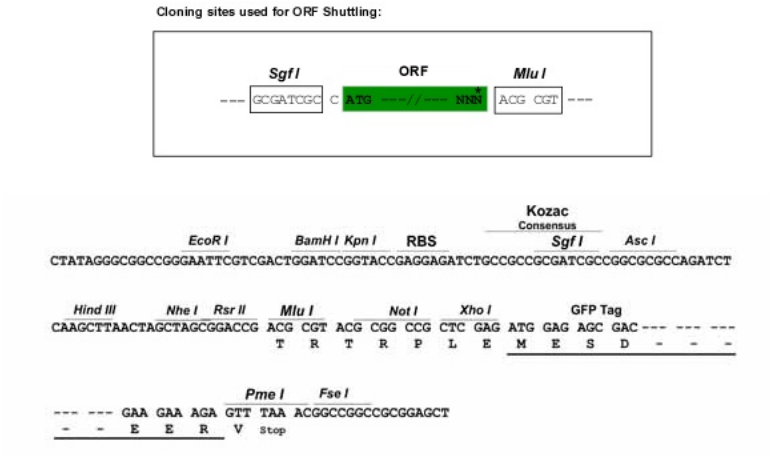
>RG209888 representing NM_024429
Red=Cloning site Green=Tags(s)

MPLLDGDLEGSGKHSSRKVDSPFGPGSPSKGFFSRGPQPRPSSPMSAPVRPKTSPGSPKTVFPFSYQESP
PRSPRRMSFSGIFRSSSKESSPNSNPATSPGGIRFFSRSRKTSGLSSSPSTPTQVTKQHTFPLESYKHEP
ERLENRIYASSSPPDTGQRFCPSSFQSPTRPPLASPTHYAPSKAAALAAALGPAEAGMLEKLEFEDEAVE
DSESGVYMRFMRSHKCYDIVPTSSKLVVFDTTLQVKKAFFALVANGVRAAPLWESKKQSFVGMLTITDFI
NILHRYYKSPMVQIYELEEHKIETWRELYLQETFKPLVNISPDASLFDAVYSLIKNKIHRLPVIDPISGN
ALYILTHKRILKFLQLFMSDMPKPAFMKQNLDELGIGTYHNIAFIHPDTPIIKALNIFVERRISALPVVD
ESGKVVDIYSKFDVINLAAEKTYNNLDITVTQALQHRSQYFEGVVKCNKLEILETIVDRIVRAEVHRLVV
VNEADSIVGIISLSDILQALILTPAGAKQKETETE

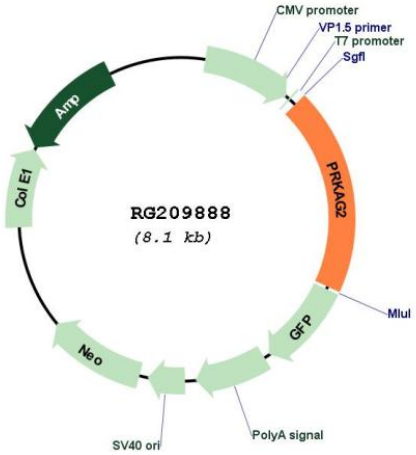
TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN:	NM_024429
ORF Size:	984 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 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).
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.
RefSeq:	NM_024429.1, NP_077747.1
RefSeq Size:	2248 bp
RefSeq ORF:	987 bp
Locus ID:	51422
UniProt ID:	Q9UGJ0
Cytogenetics:	7q36.1
Protein Families:	Druggable Genome
Protein Pathways:	Adipocytokine signaling pathway, Hypertrophic cardiomyopathy (HCM), Insulin signaling pathway
Gene Summary:	AMP-activated protein kinase (AMPK) is a heterotrimeric protein composed of a catalytic alpha subunit, a noncatalytic beta subunit, and a noncatalytic regulatory gamma subunit. Various forms of each of these subunits exist, encoded by different genes. AMPK is an important energy-sensing enzyme that monitors cellular energy status and functions by inactivating key enzymes involved in regulating de novo biosynthesis of fatty acid and cholesterol. This gene is a member of the AMPK gamma subunit family. Mutations in this gene have been associated with Wolff-Parkinson-White syndrome, familial hypertrophic cardiomyopathy, and glycogen storage disease of the heart. Alternate transcriptional splice variants, encoding different isoforms, have been characterized. [provided by RefSeq, Jan 2015]