

Product datasheet for **RG214673**

AKR7A2 (NM_003689) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	AKR7A2 (NM_003689) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	AKR7A2
Synonyms:	AFAR; AFAR1; AFB1-AR1; AKR7
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG214673 representing NM_003689 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGC**C

ATGCTGAGTGCCGCTCTCGCTAGTCTCCCGCGCCGCCGTCCACTGCGCGCTTCGCTCTCCGCCGCCG
AGGCCCGCGCTCGCCATGTCCCGCCACCGCCACCGGGTCGCTCGGTGCTGGGCACCATGGAGAT
GGGGCGCCGATGGACGCGCCCGCAGCGCCGCGCCGTGCGCGCTTCTGGAGCGCGCCACACCGAA
CTGGACACGGCCTTCATGTACAGCGACGCCAGTCCGAGACCATCCTGGGCGCCCTGGGGCTCGGGCTGG
GCGGTGGCGACTGCAGAGTGAAAATTGCCACCAAGGCCAACCCTTGGGATGGAAAATCACTAAAGCCTGA
CAGTGTCCGGTCCCAGCTGGAGACGTATTGAAGAGGCTGCAGTGTCCCAAGTGGACCTTCTACCTA
CACGCACCTGACCACGGCACCCCGGTGGAAGAGACGCTGCATGCCTGCCAGCGGCTGCACCAGGAGGGCA
AGTTTCGTGGAGCTTGGCCTCTCCAATATGCTAGCTGGGAAGTGGCCGAGATCTGTACCCTCTGCAAGAG
CAATGGCTGGATCCTGCCACTGTGTACCAGGGCATGTACAACGCCACCACCCGGCAGGTGGAAACGGAG
CTTTCCCTGCCTCAGGCACTTGGACTGAGGTTCTATGCCTACAACCTCTGGCTGGGGGCTGCTGA
CTGGCAAGTACAAGTATGAGGACAAGGACGGGAAACAGCCTGTGGGCCGCTTCTTTGGGAATAGCTGGGC
TGAGACCTACAGGAATCGCTTCTGGAAGGAGCACCCTCGAGGCCATTGCGTTGGTGGAGAAGGCCCTG
CAGGCCGATATGGCGCCAGCGCCCCAGTGTGACCTCGGCTGCCCTCCGGTGGATGTACCACCCTCAC
AGCTGCAGGGTGTCCACGGGACGCGGTATCCTGGGATGTCCAGCCTGGAGCAGCTGGAGCAGAACTT
GGCAGCAACAGAGGAAGGCCCTGGAGCCGGCTGTCGTGGATGCCTTAAATCAAGCCTGGCATTGGTT
GCTCACGAATGTCCCACTACTCCGC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >RG214673 representing NM_003689
 Red=Cloning site Green=Tags(s)

MLSAASRVVSRAAVHCALRSPPEARALAMSRPPPPRVASVLGTMEMGRRMDAPASAAAVRAFLERGHTE
 LDATFMYSDGQSETILGGLGLGLGGDCRVKIATKANPWDGKSLKPDVSRVRSQLETSLKRLQCPQVDLFYL
 HAPDHGTPVEETLHACQRLHQEGKFVELGLSNYASWEVAEICTLCKSNGWILPTVYQGMYNATTRQVETE
 LFPCLRHFGLRFYAYNPLAGLLTGKYKVEDKDGKQPVGRFFGNSWAETYNRNFWKEHHFEAIALVEKAL
 QAAYGASAPSVTSAALRWYHHSQLQGAHGDAVILGMSSLEQLEQNLAATEEGPLEPAVVDVAFNQAWHLV
 AHECPNYFR

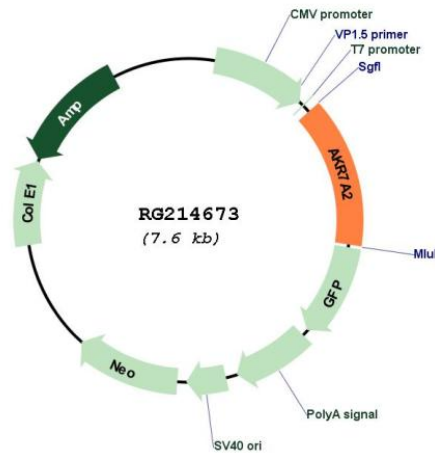
TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_003689

ORF Size:	1077 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:	<ol style="list-style-type: none">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_003689.3
RefSeq Size:	1377 bp
RefSeq ORF:	1080 bp
Locus ID:	8574
UniProt ID:	O43488
Cytogenetics:	1p36.13
Domains:	aldo_ket_red
Protein Families:	Druggable Genome
Gene Summary:	The protein encoded by this gene belongs to the aldo/keto reductase (AKR) superfamily and AKR7 family, which are involved in the detoxification of aldehydes and ketones. The AKR7 family consists of 3 genes that are present in a cluster on the p arm of chromosome 1. This protein, thought to be localized in the golgi, catalyzes the NADPH-dependent reduction of succinic semialdehyde to the endogenous neuromodulator, gamma-hydroxybutyrate. It may also function as a detoxication enzyme in the reduction of aflatoxin B1 and 2-carboxybenzaldehyde. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Mar 2016]