

Product datasheet for **RC402728**

Eph receptor A2 (EPHA2) (NM_004431) Human Mutant ORF Clone

Product data:

Product Type:	Mutant ORF Clones
Product Name:	Eph receptor A2 (EPHA2) (NM_004431) Human Mutant ORF Clone
Mutation Description:	G948W
Affected Codon#:	948
Affected NT#:	2842
Nucleotide Mutation:	EPHA2 Mutant (G948W), Myc-DDK-tagged ORF clone of Homo sapiens EPH receptor A2 (EPHA2) as transfection-ready DNA
Effect:	Cataracts
Symbol:	EPHA2
Synonyms:	ARCC2; CTPA; CTPP1; CTRCT6; ECK
E. coli Selection:	Kanamycin (25 ug/mL)
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
Tag:	Myc-DDK
ACCN:	NM_004431
ORF Size:	2928 bp
Restriction Sites:	Sgfi-MluI



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ORF Nucleotide Sequence:

>RC402728 representing NM_004431
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGAGCTCCAGGCAGCCCGCGCCTGCTTCGCCCTGCTGTGGGCTGTGCGCTGGCCCGGCCCGCGCGG
 CGCAGGGCAAGGAAGTGGTACTGCTGGACTTTGCTGCAGCTGGAGGGAGCTCGCTGGCTCACACACCC
 GTATGGCAAAGGGTGGGACCTGATGCAGAACATCATGAATGACATGCCGATCTACATGTAAGTCCGCTGTGC
 AACGTGATGTCTGGCAGCAGGACAACCTGGCTCCGCACCAACTGGGTGTACCGAGGAGAGGCTGAGCGTA
 TCTTCATTGAGCTCAAGTTTACTGTACGTGACTGCAACAGCTTCCCTGGTGGCGCCAGCTCCTGCAAGGA
 GACTTTCAACCTCTACTATGCCGAGTCGGACCTGGACTACGGCACCAACTCCAGAAGCGCCTGTTCCACC
 AAGATTGACACCATTGCGCCGATGAGATCACCGTCAGCAGCGACTTCGAGGCACGCCACGTGAAGCTGA
 ACGTGGAGGAGCGCTCCGTGGGCGCGCTCACCCGCAAAGGCTTCTACCTGGCCTCCAGGATATCGGTGC
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 TTCCCTGAGACCATCGCCGGCTCTGATGCACCTTCCCTGGCCACTGTGGCCGGCACCTGTGTGGACCATG
 CCGTGGTGCCACCGGGGGTGAAGAGCCCCGTATGCACTGTGCAGTGGATGGCGAGTGGCTGGTGCCCAT
 TGGGCAGTGCCTGTGCCAGGCAGGCTACGAGAAGTGGAGGATGCCTGCCAGGCCTGCTCGCCTGGATTT
 TTTAAGTTTGAGGCATCTGAGAGCCCCTGCTTGGAGTGCCTGAGCACACGCTGCCATCCCCTGAGGGTG
 CCACCTCCTGCGAGTGTGAGGAAGGCTTCTTCCGGCACCTCAGGACCCAGCGTCGATGCCTTGCACAGC
 ACCCCCCTCCGCCACACTACCTCACAGCCGTGGGCATGGGTGCCAAGTGGAGCTGCCTGGACGCC
 CCTCAGGACAGCGGGGGCCGAGGACATTGTCTACAGCGTCACTGCGAACAGTGTGCCCGCAGCTGTG
 GGAATGCGGGCCGTGTGAGGCCAGTGTGCGCTACTCGAGCCCTCCTCACGGACTGACCCGACCACTGT
 GACAGTGAAGCAGCTGGAGCCCCACATGAACACTACACCTTACCCTGGAGGCCCAATGGCGTCTCAGGC
 CTGGTAACCGAGCCGAGCTTCCGTACTGCCAGTGTGAGCATCAACCAGACAGAGCCCCCAAGGTGAGGC
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 GAAGTACGAGGTCACTTACCGAAGAAGGGAGACTCCAACAGTACAATGTGCGCCGACCGAGGGTTTC
 TCCGTGACCCTGGACGACTGGCCCCAGACACCACCTACCTGGTCCAGGTGCAGGCACTGACGCAGGAGG
 GCCAGGGGGCCGAGCAAGGTGACGAATTCCAGACGCTGTCCCGGAGGGATCTGGCAACTTGGCGGT
 GATTGGCGCGTGGCTGTGGTGTGGTCTGCTTCTGGTGTGCGAGGAGTTGGCTTCTTATCCACCGC
 AGGAGGAAGAACCAGCGTCCCGCCAGTCCCGGAGGAGCTTACTTCTCCAAGTCAACAACCTGAAGC
 CCTGAAGACATACGTGGACCCACACATATGAGGACCCCAACCAGGCTGTGTTGAAGTCACTACCGA
 GATCCATCCATCCTGTGTCACTCGGCAGAAGGTGATCGGAGCAGGAGAGTTTGGGGAGGTGTACAAGGGC
 ATGCTGAAGACATCCTCGGGGAAGAAGGAGTGCCTGGCCATCAAGACGCTGAAAGCCGGCTACACAG
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 CCTAGAGGGCGTCATCTCAAATAACAAGCCATGATGATCACTGAGTACATGGAGAATGGGGCCCTG
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 TCACCTCTGCCAGCGACGTGTGGAGCTTGGCATTGTGATGTGGGAGGTGATGACCTATGGCGAGCGGCC
 CTACTGGGAGTTGTCCAACCACGAGGTGATGAAAGCCATCAATGATGGCTTCCGCTCCCCACACCCATG
 GACTGCCCTCCGCCATCTACCAGTCTATGATGCAGTGTGCGAGCAGGAGCGTCCCGCCGCCCAAGT
 TCGCTGACATCGTCAGCATCCTGGACAAGCTATTCTGTCCTGACTCCCTCAAGACCTGGCTGACTT
 TGACCCCGCGTGTCTATCCGGCTCCCCAGCAGCGGCTCGGAGGGGGTGCCTTCCGCACGGTGTCC
 GAGTGGCTGGAGTCCATCAAGATGCAGCAGTATACGGAGCACTTATGGCGCCGGCTACACTGCCATCG
 AGAAGGTGGTGCAGATGACCAACGACGACATCAAGAGGATTTGGGTGCGGCTGCCCGGCCACCAGAAGCG
 CATCGCTACAGCCTGCTGGACTCAAGGACCAGTGAACACTGTGGGATCCCCATC

AG**CGGACCG**ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
 TGGATTACAAGGATGACGACGA TAAGGTTTAA

Protein Sequence: >RC402728 representing NM_004431
 Red=Cloning site Green=Tags(s)

MELQAARACFALLWGCALAAAAAQGKEVLLDFAAAGGELGWLTHPYGKGWDLMQNIMNDMPIYMSVC
 NVMSGDQDNWLRTNWVYRGEAERIFIELKFTVRDCNSFPGGASSCKETFNLYYAESDLDYGTNFQKRLFT
 KIDTIAPDEITVSSDFEARHVKLNVEERSVGPLTRKGFYLAHQDIDGACVALLSVRVYKCPPELLQGLAH
 FPETIAGSDAPSLATVAGTCVDHAVVPPGGEEPRMHCADVGEWLVPIGQCLCQAGYEKVEDACQACSPGF
 FKFEASESPCLEPHEHTLPSPEGATSCCEEGFFRAPQDPASMPCTRPPSAPHYLTAVGMGAKVELRWTP
 PQDSSGREDIVYSVTCEQCWPESGECGCEASVRYSEPPHGLTRTSVTVSLEPHMNYTFTVEARNGVSG
 LVTSRSFRTASVSINQTEPPKVRLEGRSTTSLSVSWSIPPPQSRVWKYEVTYRKKGDSNSYNVRRTEGF
 SVTLDDLAPDTTYLVQVQALQEGQGAGSKVHEFQTLSPGSGNLAVIGGVAVGVVLLVLAGVGF IHR
 RRKNQRARQSPEDVYFSKSEQLKPLKTYVDPHTYEDPNQAVLKFTTEIHPSCVTRQKVI GAGEFGEVYKG
 MLKTSSGKKEVPVAIKTLKAGYTEKQRVDFLGEAGIMQFSSHNIIRLEGVISKYKPMMIITEYMENGAL
 DKFLREKDGESVLQLVGMLRGAAGMKYLANMNYVHRDLAARNILVNSNLVCKVSDVDFGLSRVLEDDPEA
 TYTTSGGKIPIRWTAPEAISYRKFTSASDVWSFGIVMWEVMTYGERPYWELSNHEVMKAINDGFR LPTPM
 DCPSAIYQLMMQCWQERARRPKFADIVSILDKLI RAPDSLKTLADFP RVSIRLPSTSGSEGVPFRTVS
 EWLESIKMQYTEHFMAAGYTAIEKVVQMTNDDIKRIWVRLPGHQKRIAYSLGLKDVNTVGIPI

SGPTRRRLEQKLI SEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-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).

RefSeq: [NP_004422](#)

RefSeq Size: 2928 bp

RefSeq ORF: 2931 bp

Locus ID: 1969

Cytogenetics: 1p36.13

Domains: pkinase, EPH_Ibd, TyrKc, SAM, S_TKc, FN3

Protein Families: Druggable Genome, Protein Kinase, Transmembrane

Protein Pathways: Axon guidance

MW: 107.4 kDa

Gene Summary: This gene belongs to the ephrin receptor subfamily of the protein-tyrosine kinase family. EPH and EPH-related receptors have been implicated in mediating developmental events, particularly in the nervous system. Receptors in the EPH subfamily typically have a single kinase domain and an extracellular region containing a Cys-rich domain and 2 fibronectin type III repeats. The ephrin receptors are divided into 2 groups based on the similarity of their extracellular domain sequences and their affinities for binding ephrin-A and ephrin-B ligands. This gene encodes a protein that binds ephrin-A ligands. Mutations in this gene are the cause of certain genetically-related cataract disorders.[provided by RefSeq, May 2010]