

## Product datasheet for **SC323494**

### Eph receptor A3 (EPHA3) (NM\_005233) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Eph receptor A3 (EPHA3) (NM_005233) Human Untagged Clone
Tag:	Tag Free
Symbol:	Eph receptor A3
Synonyms:	EK4; ETK; ETK1; HEK; HEK4; TYRO4
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>OriGene ORF within SC323494 sequence for NM_005233 edited (data generated by NextGen Sequencing)

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ATGGATTGTCAGCTCTCCATCCTCCTCCTCCTCAGCTGCTCTGTTCTCGACAGCTTCGGG
GAACTGATTCCGAGCCTTCCAATGAAGTCAATCTACTGGATTCAAAAACAATCAAGGG
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CATTACACACCCATCAGGACTTACCAGGTGTGCAATGTCATGGACCACAGTCAAAAACAAT
TGGCTGAGAACAACTGGGTCCCCAGGAACTCAGCTCAGAAGATTTATGTGGAGCTCAAG
TTCCTACTACGAGACTGCAATAGCATTCCATTGGTTTTAGGAACTTGCAAGGAGACATTC
AACCTGTACTACATGGAGTCTGATGATGATCATGGGGTGAATTTTCGAGAGCATCAGTTT
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CCACCAAGACAGTTTGTGCGGTCAGCATCACAATAATCAGGCTGCTCCATCACCTGTC
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GAACATCCTAATGGGATCATATTGGACTACGAGGTCAAATACTATGAAAAGCAGGAACAA
GAAACAAGTTATACCATTCTGAGGGCAAGAGGCACAAATGTTACCATCAGTAGCCTCAAG

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CCTGACACTATATACGTATTCCAATCCGAGCCCCGAACAGCCGCTGGATATGGGACGAAC
AGCCGCAAGTTTGAGTTTGAACTAGTCCAGACTCTTTCTCCATCTCTGGTGAAAGTAGC
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CTTCTTGGACCAAGCAATGTGGATACACTACCTCCGCACAACAGGTGACTGGCTT
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GACACAATAGCCAAGATTTCCACAGATGACATGAAAAAGTTGGTGTACCCGTGGTTGGG
CCACAGAAGAAGATCATCAGTAGCATTAAGCTCTAGAAACGCAATCAAAGAATGCCCA
GTTCCCGTGTA
```

Clone variation with respect to NM\_005233.5

**5' Read Nucleotide Sequence:**

>OriGene 5' read for mutant NM\_005233 unedited  
 ACCCCGCCCCGTTGCACCGAGGGCGGTAGGCGTGTGCGAAGGGAGGTCTATATAAGCAGAGCTCGTTAGT  
 GAACCGACATTTTTTTGTAACTACTACTATAGGGCGCCCGCAATTCGGCAGAGGATGGAGATATG  
 CTCCTCTCACTGCCCTCTGCACCCACAACATGGATTGTCAACTTTCCACCCTCCTCTTCTCAACTGCTC  
 TGCTCTCGACCGTTACCGACCTGACCCCGCAACCTTCCGATGAAGGCAAGTTACTGGATTCAACACGA  
 TTCAAGGGGAGCTGGGCTGTATCTTTATCCATCAAATGGTGGAAAGAAGATCAGTGGGGGGGGGAACAT  
 ACACACCCTTCCAGGCTTCCAGGTGTGCAAGGTCTGGCCAACACCAACAATTGGCTAAGAACAACCGGG  
 TCCCAGAAACCCCTCAAACATCTGTGGCCAACGCTCACTCCACAAAAGCGAATCCCTTCTTCTTGG  
 TTTTTAGGAAAC

**Kinase Domain Sequence:**

>SC323494 kinase domain raw sequence. By performing [BLASTX](#) analysis with this sequence against NCBI reference protein database, you can confirm the presence of the kinase-deficient mutation  
 AATGCTGGGACAGTGATTTGGAGAGGTGTGCAGTGGTCGCTTAAAACCTCCTTCAAAAAAGAGATTTCA  
 GTGGCCATTATGACCCTGAAAGTTGGCTACACAGAAAAGCAGAGGAGAGACTTCTGGGAGAAGCAAGCA  
 TTATGGGACAGTTTGACCACCCCAATATCATTGACTGGAAGGAGTTGTTACCAAAAGTAAGCCAGTTAT  
 GATTGTACAGAATACATGGAGAATGGTTCCTTGGATAGTTTCCT

**Restriction Sites:**

Please inquire

**ACCN:**

NM\_005233

**Insert Size:**

6000 bp

**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](mailto: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 kinase-deficient mutant clone was generated by created by site-directed mutagenesis from the corresponding wild-type clone. See details in "Application of active and kinase-deficient kinome collection for identification of kinases regulating hedgehog signaling." [Cell. 2008 May p536-548.](#)

**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\\_005233.3](#), [NP\\_005224.2](#)

**RefSeq Size:** 5837 bp

**RefSeq ORF:** 2952 bp

**Locus ID:** 2042

**UniProt ID:** [P29320](#)

**Cytogenetics:** 3p11.1

**Domains:** pkinase, EPH\_lbd, TyrKc, SAM, S\_TKc, FN3

**Protein Families:** Druggable Genome, Protein Kinase, Secreted Protein, Transmembrane

**Protein Pathways:** Axon guidance

**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. Two alternatively spliced transcript variants have been described for this gene. [provided by RefSeq, Jul 2008]

Transcript Variant: This variant (1) encodes the longer isoform (a).