

## Product datasheet for **RG224881**

### Aspartate beta hydroxylase (ASPH) (NM\_032467) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Aspartate beta hydroxylase (ASPH) (NM_032467) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	ASPH
Synonyms:	AAH; BAH; CASQ2BP1; FDLAB; HAAH; JCTN; junctin
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG224881 representing NM_032467 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCTGAAGATAAAGAGACAAAGCATGGAGGACACAAGAATGGGAGGAAAGGCGGACTCTCAGGAAGCTT  
CATTCTTCACGTGGTTTATGGTATTGCATTGCTGGGCGTCTGGACATCTGTAGCTGTGTTTTGTTTGA  
TCTTGTGACTATGAGGAAGTTCTAGGAAAAGTGAATCTATGATGCTGATGGTATGGAGATTTGAT  
GTGGATGATGCCAAAGTTTTATTAGAAGGACCCAGTGGGTAGCCAAGAGAAAACTAAGGCTAAAGTTA  
AAGAAGTCACTAAAGAAGAGCTCAAGAAGGAGAAAGAGAACTGAGTCAAGGAAGGAAAGTAAAGATGA  
AGAGAGAAAAAGGGAAAGAAAGAGGATGTCCGAAAGGATAAGAAAATTGCTGATGCAGACCTATCCAGG  
AAGGAGTCTCCTAAGGTTAAAAAGGACAGAGAAAAAGAGAAAGTGGACCTAGAAAAAGTCTAAAACCA  
AGGAAAAAGGAAAAATCAACAAATATGAAGGATGTTTCTAGTAAAATGGCATCCCAGACAAAGATGA  
CAGAAAGGAAAGTAGAAGTTCTACCAGATATGCACACTTAACAAAGGAAATACCCAGAAAAAGAACGGC

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:	>RG224881 representing NM_032467 Red=Cloning site Green=Tags(s)
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MAEDKETKHGGHKNGRKGGLSGTSFFTFWFMVIALLVVWTSVAVVWFDLVDYEEVLGKLGIIYDADGDGDFD  
VDDAKVLLLEGPSVAKRRTKAKVKELTKEELKKEKEKPEPESRKEKNEERKKGKEDVRKDKKIADADLSR  
KESPKGKKDREKEKVDLEKSAKTENRKKSTNMKDVSSKMASRDKDDRKESRSSTRYAHLTGKNTQKRNG

**TRTRPLE** - GFP Tag - V

Restriction Sites:	Sgfl-MluI
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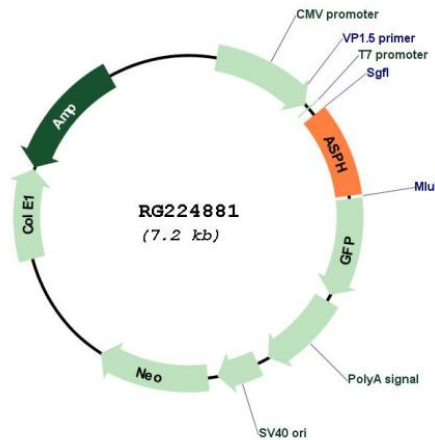
[View online »](#)

Cloning Scheme:

Cloning sites used for ORF Shutting:



Plasmid Map:



ACCN: NM\_032467  
 ORF Size: 630 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 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\\_032467.4](#)

**RefSeq Size:** 3242 bp

**RefSeq ORF:** 633 bp

**Locus ID:** 444

**UniProt ID:** [Q12797](#)

**Cytogenetics:** 8q12.3

**Domains:** Asp-B-Hydro\_N

**Protein Families:** Druggable Genome, Transmembrane

**Gene Summary:**

This gene is thought to play an important role in calcium homeostasis. The gene is expressed from two promoters and undergoes extensive alternative splicing. The encoded set of proteins share varying amounts of overlap near their N-termini but have substantial variations in their C-terminal domains resulting in distinct functional properties. The longest isoforms (a and f) include a C-terminal Aspartyl/Asparaginyl beta-hydroxylase domain that hydroxylates aspartic acid or asparagine residues in the epidermal growth factor (EGF)-like domains of some proteins, including protein C, coagulation factors VII, IX, and X, and the complement factors C1R and C1S. Other isoforms differ primarily in the C-terminal sequence and lack the hydroxylase domain, and some have been localized to the endoplasmic and sarcoplasmic reticulum. Some of these isoforms are found in complexes with calsequestrin, triadin, and the ryanodine receptor, and have been shown to regulate calcium release from the sarcoplasmic reticulum. Some isoforms have been implicated in metastasis. [provided by RefSeq, Sep 2009]