

## Product datasheet for **RC216796**

### Aspartate beta hydroxylase (ASPH) (NM\_004318) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Aspartate beta hydroxylase (ASPH) (NM_004318) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Aspartate beta hydroxylase
Synonyms:	AAH; BAH; CASQ2BP1; FDLAB; HAAH; JCTN; junctin
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide  
Sequence:**

>RC216796 representing NM\_004318  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTGCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGCCAGCGTAAGAATGCCAAGAGCAGCGGCAACAGCAGCAGCAGCGGCTCCGGCAGCGGTAGCACGA  
 GTGCGGGCAGCAGCAGCCCCGGGCCCGGAGAGAGACAAAGCATGGAGGACACAAGAATGGGAGGAAAGG  
 CGGACTCTCAGGAACCTCATTCTTCACGTGTTTTATGGTATTGCATTGCTGGGCGTCTGGACATCTGTA  
 GCTGTCGTTTTGGTTTGTCTTGTGACTATGAGGAAGTTCTAGGAAAAGTCTAGGAATCTATGATGCTGATG  
 GTGATGGAGATTTTGTGATGGATGATGCCAAAGTTTTATTAGGACTTAAAGAGAGATCTACTTCAGAGCC  
 AGCAGTCCCGCCAGAAGAGGCTGAGCCACACACTGAGCCCGAGGAGCAGGTTCTGTGGAGGCAGAACCC  
 CAGAATATCGAAGATGAAGCAAAAGAACAATTCAGTCCCTTCTCCATGAAATGGTACACGCAGAACATG  
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 TATGGCGACTGATGTAGATGATAGATTTGAGACCTGGAACCTGAAGTATCTCATGAAGAAACCGAGCAT  
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 AAAATCCAGATCCAGTGAACAGTAGTAGAAGATGAAAGATTGCACCATGATACAGATGATGTAACATA  
 CCAAGTCTATGAGGAACAAGCAGTATATGAACCTCTAGAAAATGAAGGGATAGAAATCACAGAAGTAACT  
 GCTCCCCCTGAGGATAATCCTGTAGAAGATTCACAGGTAATTGTAGAAGAAGTAAGCATTTCCTGTGG  
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 CTCCGTAAGGGGAAAAATTGAGGAAGCAGTGAATGCATTTAAGAAGTACGACAAAATCCCTCAGA  
 GTCCACGAGCAAGATATGGGAAGGCGCAGTGTGAGGATGATTTGGCTGAGAAGAGGAGAAGTAATGAGGT  
 GCTACGTGGAGCCATCGAGACCTACCAAGAGGTGGCCAGCCTACCTGATGTCCCTGCAGACCTGCTGAAG  
 CTGAGTTTGAAGCGTCGCTCAGACAGGCAACAATTTCTAGGTCATATGAGAGGTTCCCTGCTTACCTGC  
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 CAGAGTTAGTAAAGTCTTTAGAAAGAACTGGAAGTTAATCCGAGATGAAGGCCTTGCAGTATGGATAA  
 AGCCAAAGGTCTTCTTCTGCCTGAGGATGAAAACCTGAGGGAAAAAGGGGACTGGAGCCAGTTACAGCTG  
 TGGCAGCAAGGAAGAAGAAATGAAAATGCCTGCAAAGGAGCTCCTAAAACCTGTACCTTACTAGAAAAGT  
 TCCCCGAGACAACAGGATGCAGAAGAGGACAGATCAAAATATCCATCATGCACCCCGGGACTCACGTGTG  
 GCCGCACACAGGGCCCAAACTGCAGGTTCCGAATGCACCTGGGCTTGGTATTCCAAGGAAGGCTGC  
 AAGATTCGATGTGCCAACGAGACCAAGACCTGGGAGGAAGGCAAGGTGCTCATCTTTGATGACTCCTTTG  
 AGCAGGAGGTATGGCAGGATGCCTCATCTTTCCGGCTGATATTCATCGTGGATGTGTGCCATCCGGAAC  
 GACACCACAGCAGAGACGCAGCCTTCCAGCAATT

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC216796 representing NM\_004318  
Red=Cloning site Green=Tags(s)

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MAQRKNAKSSGNSSSSSGSGSGSTSAGSSSPGARRETKHGGHKNGRKGGLSGTSFFTFWMVIALLGWVTSV
AVVWFDLVDYEEVLGKGLGIYDADGDGDFDVKVLLGLKERSTSEPAVPPEEAEPHTEPEEQVPVEAEP
QNIIEDEAKEQIQSLLHEMVHAEHVEGEDLQQEDGPTGEPQQEDEFMATDVDDRFELEPEVSHEETEH
SYHVEETVSQDCNQDMEEMMSEQENPDSSEPVEDERLHHDTHDDVYQVYEEQAVVEPLENEGIEITEVT
APPEDNPVEDSQVIVEEVSIFPVVEEQEVPPETNRKTDDPEQKAKVKKKKPKLLNKFDKTIKAELDAAEK
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LSLKRRSDRQQFLGHMRGSLTLQRLVQLFPNDTSLKNDLGVGYLLIGDNDNAKKVYEEVLSVTPNDGFA
KVHYGFIKKAQNKIAESIPYLKEGIESGDPGTDGGRFYFHLGDAMQRVGNKEAYKWYELGHKRGHFASVW
QRSLYNVNLKAQPWWTPKETGYTELKSLERNWKLIRDEGLAVMDKAKGLFLPEDENLREKGDWSQFTL
WQQGRRNENACKGAPKTCTLLEKFPETTGCRGQIKYSIMHPGTHVWPHTPGTNCRFRMHLGLVIPKEGC
KIRCANETKTWEEGKVLIFDDSFHEVWQDASSFRLIFIVDVWHPPELTPQRRSLPAI
    
```

TRTRPLEQKLISEEDLANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6099\\_g09.zip](https://cdn.origene.com/chromatograms/mk6099_g09.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_004318

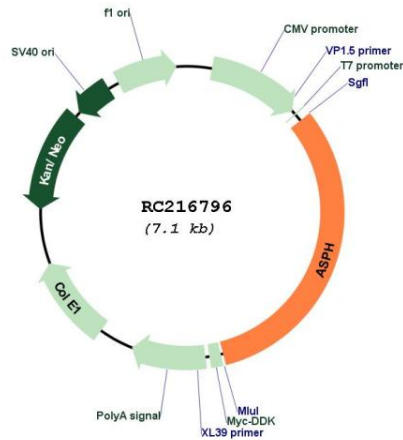
**ORF Size:** 2274 bp

**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](#)

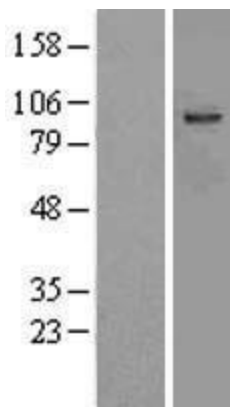
**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>Note:</b>	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
<b>RefSeq:</b>	<a href="#">NM_004318.4</a>
<b>RefSeq Size:</b>	2452 bp
<b>RefSeq ORF:</b>	2277 bp
<b>Locus ID:</b>	444
<b>UniProt ID:</b>	<a href="#">Q12797</a>
<b>Cytogenetics:</b>	8q12.3
<b>Domains:</b>	TPR, Asp_Arg_Hydrox, Asp-B-Hydro_N
<b>Protein Families:</b>	Druggable Genome, Transmembrane
<b>MW:</b>	85.7 kDa
<b>Gene Summary:</b>	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]

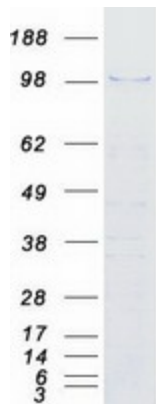
Product images:



Circular map for RC216796



Western blot validation of overexpression lysate (Cat# [LY418063]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC216796 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified ASPH protein (Cat# [TP316796]). The protein was produced from HEK293T cells transfected with ASPH cDNA clone (Cat# RC216796) using MegaTran 2.0 (Cat# [TT210002]).