

Product datasheet for **RC201755**

CBS (NM_000071) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CBS (NM_000071) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	CBS
Synonyms:	CBSL; HIP4
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

ORF Nucleotide Sequence:

>RC201755 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGCCTTCTGAGACCCCCAGGCAGAAGTGGGGCCACAGGCTGCCCCACCCTCAGGGCCACTCGG
 CGAAGGGGAGCCTGGAGAAGGGGTCCCCAGAGGATAAGGAAGCCAAGGAGCCCTGTGGATCCGGCCCGA
 TGCTCCGAGCAGGTGCACCTGGCAGCTGGGCGGCCTGCCTCCGAGTCCCCACATCACCACACTCCCCG
 GCAAAATCTCAAAAATCTTGCCAGATATTCTGAAGAAAATCGGGGACACCCCTATGGTCAGAATCAACA
 AGATTGGGAAGAAGTTCGGCCTGAAGTGTGAGCTTTGGCCAAGTGTGAGTTCTCAACGCGGGCGGGAG
 CGTGAAGGACCGCATCAGCCTGCGGATGATTGAGGATGCTGAGCGGACGGGACGCTGAAGCCCGGGAC
 ACGATTATCGAGCCGACATCCGGGAACACCGGGATCGGGCTGGCCCTGGCTGCGGCAGTGAGGGGCTATC
 GCTGCATCATCGTATGCCAGAGAAGATGAGCTCCGAGAAGGTGGACGTGCTGCGGGCACTGGGGCTGA
 GATTGTGAGGACGCCACCAATGCCAGGTTGACTCCCCGGAGTACACGTGGGGTGGCCTGGCGGCTG
 AAGAACGAAATCCCAATTCACATCCTAGACCAGTACCGCAACGCCAGCAACCCCTGGCTCACTACG
 ACACCACCGTGTGAGATCCTGCAGCAGTGTGATGGGAAGCTGGACATGCTGGTGGCTTCACTGGGCAC
 GGGCGGCACCATCACGGCATTGCCAGGAAGCTGAAGGAGAAGTGTCTGGATGCAGGATCATTGGGGTG
 GATCCCGAAGGGTCCATCCTCGCAGAGCCGGAGGAGCTGAACCAGACGGAGCAGACAACCTACGAGGTGG
 AAGGGATCGGCTACGACTTATCCCCACGGTGTGGACAGGACGGTGGTGGACAAGTGGTTCAAGAGCAA
 CGATGAGGAGGCGTTACCTTTGCCCGCATGCTGATCGCGCAAGAGGGGCTGCTGTGCGGTGGCAGTGT
 GGCAGCACGGTGGCGGTGGCCGTGAAGGCCGCGCAGGAGCTGCAGGAGGGCCAGCGCTGCGTGGTCATT
 TGCCCGACTCAGTGCAGAACTACATGACCAAGTTCCTGAGCGACAGGTGGATGCTCAGAAGGGCTTTCT
 GAAGGAGGAGGACCTCACGGAGAAGAAGCCCTGGTGGTGGCACCTCCGTGTTCAAGGAGCTGGGCCTGCA
 GCCCGCTGACCGTGTCCCGACCATCACCTGTGGGCACACCATCGAGATCCTCCGGGAGAAGGGCTTCG
 ACCAGGCGCCCGTGGTGGATGAGGCGGGGTAATCCTGGGAATGGTACGCTTGGGAACATGCTCTCGTC
 CCTGCTTGCCGGGAAGGTGCAGCCGTCAGACCAAGTTGGCAAAGTCATCTACAAGCAGTTCAAACAGATC
 CGCCTCACGGACAGCTGGGCAGGCTCTCGCACATCCTGGAGATGGACCATTGCGCCTGGTGGTGCACG
 AGCAGATCCAGTACCACAGCACCAGGAAGTCCAGTACGCGGCAGATGGTGTTCGGGGTGGTACCGCCAT
 TGACTTGCTGAACCTCGTGGCCGCCAGGAGCGGGACCAGAAG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC201755 protein sequence
 Red=Cloning site Green=Tags(s)

MPSETPQAEVGP TGCPHRSGPHSAKGSLEKSPEDKEAKEPLWIRPDAPSRCTWQLGRPASESPHHHTPP
 AKSPKILPDILKKIGDTPMVRINKIGKFKLCELLAKCEFFNAGGSVKDRISLRMIEDAERDGLKPGD
 TIIIEPTSGNTGIGLALAAVRGYRCIIVMPEKMSSEKVDVLRALGAEIVRTPNARFDSPEHVGVAWRL
 KNEIPNSHILDQYRNASNPLAHYDTTADEILQQCDGKLDMLVASVGTGGTITGIARKLKEKCPGCRIGV
 DPEGSILAEPEELNQTEQTTVEVEGIGYDFIPTVLDRTVVDKWFKSNDEEAFTFARMLIAQEGLLCGGSA
 GSTVAVAVKAAQELQEQRCVVILPDSVRNYMTKFLSDRWMLQKGFLEEDLTEKKPWWWHLRVQELGLS
 APLTVLPTITCGHTIEILREKGFDPVVEAGVILGMVTLGNMLSSLLAGKVQPSDQVGKVIYKQFKQI
 RLTDTLGRLSHILEMDHFALVVHEQIQYHSTGKSSQRQMVFGVVT AIDL LNFVAAQERDQK

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6148_e11.zip

Restriction Sites:

SgfI-MluI

Cloning Scheme:


ACCN: NM_000071

ORF Size: 1653 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:**
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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

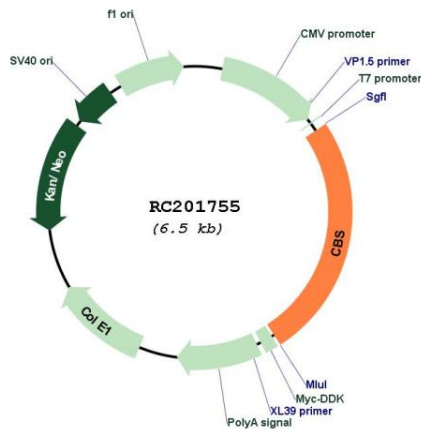
RefSeq: [NM_000071.3](#)

RefSeq Size: 2609 bp

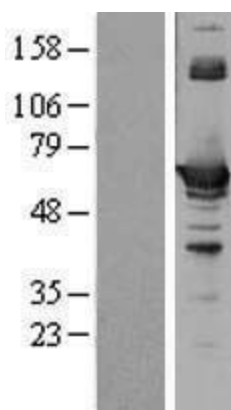
RefSeq ORF: 1656 bp

Locus ID: 875

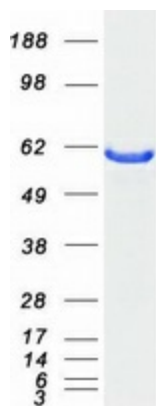
UniProt ID:	P35520
Cytogenetics:	21q22.3
Domains:	CBS, PALP
Protein Families:	Druggable Genome
Protein Pathways:	Cysteine and methionine metabolism, Glycine, serine and threonine metabolism, Metabolic pathways, Selenoamino acid metabolism
MW:	60.6 kDa
Gene Summary:	The protein encoded by this gene acts as a homotetramer to catalyze the conversion of homocysteine to cystathionine, the first step in the transsulfuration pathway. The encoded protein is allosterically activated by adenosyl-methionine and uses pyridoxal phosphate as a cofactor. Defects in this gene can cause cystathionine beta-synthase deficiency (CBS), which can lead to homocystinuria. This gene is a major contributor to cellular hydrogen sulfide production. Multiple alternatively spliced transcript variants have been found for this gene. [provided by RefSeq, Feb 2016]

Product images:


Circular map for RC201755



Western blot validation of overexpression lysate (Cat# [LY400017]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC201755 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified CBS protein (Cat# [TP301755]). The protein was produced from HEK293T cells transfected with CBS cDNA clone (Cat# RC201755) using MegaTran 2.0 (Cat# [TT210002]).