

Product datasheet for **SC128074**

CBS (NM_000071) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CBS (NM_000071) Human Untagged Clone
Tag:	Tag Free
Symbol:	CBS
Synonyms:	CBSL; HIP4
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC (PS100020)
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF: >NCBI ORF sequence for NM_000071, the custom clone sequence may differ by one or more nucleotides

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ATGCCTTCTGAGACCCCCAGGCAGAAGTGGGGCCCCACAGGCTGCCCCACCCTCAGGGCCACACTCGG
CGAAGGGGAGCCTGGAGAAGGGTCCCCAGAGGATAAGGAAGCCAAGGAGCCCCGTGGATCCGGCCCGA
TGCTCCGAGCAGGTGCACCTGGCAGCTGGGCCGGCCTGCCTCCGAGTCCCACATCACCACACTGCCCCG
GCAAAATCTCAAAAATCTTGCCAGATATTCTGAAGAAAATCGGGGACACCCTATGGTCAGAATCAACA
AGATTGGGAAGAAGTTCGGCCTGAAGTGTGAGCTCTTGGCCAAGTGTGAGTTCTTCAACGCGGGCGGGAG
CGTGAAGGACCGCATCAGCCTGCGGATGATTGAGGATGCTGAGCGCGACGGGACGCTGAAGCCCGGGGAC
ACGATTATCGAGCCGACATCCGGGAACACCGGGATCGGGCTGGCCTGGCTGCGGCAGTGAGGGGCTATC
GCTGCATCATCGTGATGCCAGAGAAGATGAGCTCCGAGAAGGTGGACGTGCTGCGGGCACTGGGGGCTGA
GATTGTGAGGACGCCACCAATGCCAGGTTGACTCCCCGGAGTCACACGTGGGGTGGCCTGGCGGCTG
AAGAACGAAAATCCCAATCTCACATCCTAGACCAGTACCGCAACGCCAGCAACCCCTGGCTACTACG
ACACCACCGCTGATGAGATCCTGCAGCAGTGTGATGGGAAGCTGGACATGCTGGTGGCTTCACTGGGCAC
GGCGGGCACCATCACGGCATTGCCAGGAAGCTGAAGGAGAAGTGTCTGGATGCAGGATATTGGGGTGG
GATCCCGAAGGGTCCATCCTCGCAGAGCCGGAGGAGCTGAACCAGACGGAGCAGACAACCTACGAGGTGG
AAGGGATCGGCTACGACTTCATCCCCACGGTGTGGACAGGACGGTGGTGGACAAGTGGTTCAAGAGCAA
CGATGAGGAGGCGTTACCTTTGCCCGCATGCTGATCGCGCAAGAGGGGCTGCTGTGCGGTGGCAGTGTCT
GGCAGCACGGTGGCGGTGGCCGTGAAGGCCCGCAGGAGCTGCAGGAGGGCCAGCGCTGCGTGGTCAATC
TGCCCCACTCAGTGGGAACACATGACCAAGTTCCTGAGCGACAGGTGGATGCTGCAGAAGGGCTTCTC
GAAGGAGGAGGACCTCACGGAGAAGAAGCCCTGGTGGTGGCACCTCCGTGTTCAAGAGCTGGGGCTGTCA
CCCCCGTACCCTGCTCCCGACCATCACCTGTGGGCACACCATCGAGATCCTCCGGGAGAAGGGCTTCC
ACCAGGCCCGCTGGTGGATGAGGCGGGGTAATCCTGGGAATGGTACGCTTGGGAACATGCTCTCGTC
CCTGCTTGCCGGGAAGGTGCAGCCGTGAGACCAAGTTGGCAAAGTCATCTACAAGCAGTTCAAACAGATC
CGCCTCACGGACAGCTGGGCAGGCTCTCGCACATCCTGGAGATGGACCACTTCGCCCTGGTGGTGCACG
AGCAGATCCAGTACCACAGCACCGGAAGTCCAGTCCAGCGGCAGATGGTGTTCGGGGTGGTACCGCCAT
TGACTTGCTGAACCTCGTGGCCGCCAGGAGCGGGACCAGAAAGTGA
    
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5' Read Nucleotide Sequence:

>OriGene 5' read for NM_000071 unedited

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TACTATAGGGCGGCCGCGATTTCGGCACGAGGGCCGAGTCGGGGCAGCCGCTCGCCCTC
TTTTCCATGTATCCGTCCAGGATCCCATGACAGATTCTGTTGTCACGTCTCCTTACAGAG
TTTGAGCGGTGCTGAAGTGTGACACCATCTGTCCGGTCCCAGCATGCCTTCTGAGACCC
CCCAGGCAGAAGTGGGGCCACAGGCTGCCCCACCGCTCAGGGCCACACTCGGCGAAGG
GGAGCCTGGAGNAAGGGTCCCCAGAGGATAAGGAAGCCAAGGGAGCCCCGTGGATCCG
GCCCCGATGCTCCGAGCAGGTGCACCTGGCAGCTGGGCCGGCCTGCCTCCGAGTCCCACA
TCACCACACTGCCCCGGCAAAATCTCAAAAATCTTGCCAGATATTCTGAAGAAAATCGG
GGACACCCTATGGTCAGAATAACAAGATGGGAAGAAGTTCGGCCTGAAGTGTGAGCTC
TTGGCCAAGTGGTGAAGTCTTCAACGCGGGCGGGAGCGTGAAGGACCGCATCAGCCTGCG
GATGATNTGAGGATGCTGAGCGGACGGGACGCTGAAGCCCGNGACACGATTATCGAGC
CGACATCCGGGACACCCGGGATCCGGGCTTGGCCCTGCTGCNGCANNGAAGGGGCTATC
GCTGCATCATCGTGATGCCAGAGAGATGACTCCAGAGGGGGGGACTGGCTGCGGCCCTG
GGGGCTTTGAAATGGTGAAGGACGCCACCATGGCCAGTTCGACTCCCCGATCCTNNNNGN
GNGGGGGGGGGCCCCGGCGCTTAAAAAAAAAACCCATTTTTTACATCCTAAACCAGA
CCGGAACGCAGAACCCCTGGTTTATATACACACCGTTGATAAATCCCGCACATGGGATG
GGAAACTGAATCCTGGGGCTTTATGGCCCCGA
    
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3' Read Nucleotide Sequence:	>OriGene 3' read for NM_000071 unedited NNNTTTTTGCTTATGGACCGCGNCCGCATNCTANGATCGAGTTTTTTTTTTTTTTTTTTT GTGTGATTCCATTTATATGAAATGTCCAGNACAGGGGAAAACCTATTTTAGACAACAGAG ACACAAAGTCGATCAGCAGTTGCCAGGGGAGGAGGAAGACGGGAGGGGAAATGATTGCTT CACAGGGTGATGACAGAAATGTTCCGGAACGTGACAGAGGTGGTGCCTACACAACCTTCTG GATGTAATAATGCCGCTGATTGTTCACTTTCAAGTGATTGATTTTTAGGTTATTTGAAT TTCATCTCAATTAATAAACCCAAACACGCAAACTGCTCCCGCCAGCTCAGCCCCGAGCAG ACGGCGCAGCCCGTGGAGGATGCTGAGCCACCCAGGCTTCTCCCGCCCTTCTGGACT CTTCTCTTTTTGCCTTAATCCACTCTGCGCAGTCATTGCCTGTGTTTCATCCTACCTGG CCGACTTCTCTCAATATTTCTTGGTAAACATCCTAAGAGGAAGTTACATTAGAGAA AATCACATATTTTCATCTCATAGGCCGTAACAGGGCCATTTAGGAAGCCATGTGTTAACG AGGGGAGACGGATGCTCTGTGCCGTGTGCAGGGATAACGGTGCCAGGCCAGGCAGTTACC AATCACGCGTGTGTTTAGGGCTCANGAAAGCGAAGGAGAAGTGGGCAAGGGTGGNGGGCC CGTTTCGACCGNCCAGNGCTTCGGACTTCACTTCTGGTCCCGCTCCTGGGCGGCCACGA AGTTAGCAAGTCAATGGCGGTGACCACCCGAACCCCTCTGNCGCTGACTGGACTCCCCG NTGCTGGGGTACTGGATCTGCTCGTGACACCACCAGGGCCAAATGGGTCTCTCCAGAATT GCCAAAACCTGCA
Restriction Sites:	NotI-NotI
ACCN:	NM_000071
Insert Size:	2360 bp
OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
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:	<ol style="list-style-type: none"> 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:	<u>NM_000071.1</u> , <u>NP_000062.1</u>
RefSeq Size:	2544 bp
RefSeq ORF:	1656 bp
Locus ID:	875
UniProt ID:	<u>P35520</u>
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
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]