

Product datasheet for **RG230260**

CBS (NM_001178008) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CBS (NM_001178008) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	CBS
Synonyms:	CBSL; HIP4
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG230260 representing NM_001178008
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGCCTTCTGAGACCCCCAGGCAGAAGTGGGGCCACAGGCTGCCCCACCGCTCAGGGCCACACTCGG
 CGAAGGGGAGCCTGGAGAAGGGGTCCCCAGAGGATAAGGAAGCCAAGGAGCCCTGTGGATCCGGCCCGA
 TGCTCCGAGCAGGTGCACCTGGCAGCTGGGCGGCTGCCTCCGAGTCCCCACATCACCACACTGCCCCG
 GCAAAATCTCAAAAATCTTCCAGATATTCTGAAGAAAATCGGGGACACCCCTATGGTCAGAATCAACA
 AGATTGGGAAGAAGTTCGGCCTGAAGTGTGAGCTCTTGGCCAAGTGTGAGTTCTTCAACGCGGGCGGGAG
 CGTGAAGGACCGCATCAGCCTGCGGATGATTGAGGATGCTGAGCGGACGGGACGCTGAAGCCCGGGAC
 ACGATTATCGAGCCGACATCCGGGAACACCGGGATCGGGCTGGCCCTGGCTGCGGCAGTGAGGGGCTATC
 GCTGCATCATCGTATGCCAGAGAAGATGAGCTCCGAGAAGGTGGACGTGCTGCGGGCACTGGGGGCTGA
 GATTGTGAGGACGCCACCAATGCCAGGTTGACTCCCCGGAGTACACGTGGGGTGGCCTGGCGGCTG
 AAGAACGAAATCCCAATTCTCACATCCTAGACCAGTACCGCAACGCCAGCAACCCCTGGCTCACTACG
 ACACCACCGTGTGAGATCCTGCAGCAGTGTGATGGGAAGCTGGACATGCTGGTGGCTTCACTGGGCAC
 GGGCGGCACCATCACGGGCATTGCCAGGAAGCTGAAGGAGAAGTGTCTGGATGCAGGATCATTGGGGTG
 GATCCCGAAGGGTCCATCCTCGCAGAGCCGGAGGAGCTGAACCAGACGGAGCAGACAACCTACGAGGTGG
 AAGGGATCGGCTACGACTTATCCCCACGGTGTGGACAGGACGGTGGTGGACAAGTGGTCAAGAGCAA
 CGATGAGGAGGCGTTACCTTTGCCGCATGCTGATCGCGCAAGAGGGGCTGCTGTGCGGTGGCAGTGT
 GGCAGCACGGTGGCGGTGGCCGTGAAGGCCGCGCAGGAGCTGCAGGAGGGCCAGCGCTGCGTGGTCAATC
 TGCCCGACTCAGTGCAGCACTACATGACCAAGTTCCTGAGCGACAGGTGGATGCTGCAGAAGGGCTTCT
 GAAGGAGGAGGACCTCACGGAGAAGAAGCCCTGGTGGTGGCACCTCCGTGTTCAAGGAGTGGCCTGTCA
 GCCCGCTGACCGTGTCCCGACCATCACCTGTGGGCACACCATCGAGATCCTCCGGGAGAAGGGCTTCG
 ACCAGGCGCCCGTGGTGGATGAGGCGGGGTAATCCTGGGAATGGTACGCTTGGGAACATGCTCTCGTC
 CCTGCTTGCCGGGAAGGTGCAGCCGTCAGACCAAGTTGGCAAAGTCATCTACAAGCAGTTCAAACAGATC
 CGCCTCACGGACAGCTGGGCAGGCTCTCGCACATCCTGGAGATGGACCCTCGCCCTGGTGGTGCACG
 AGCAGATCCAGTACCACAGCACCGGAAGTCCAGTACGCGGCAGATGGTGTTCGGGGTGGTACCGCCAT
 TGACTTGCTGAACCTCGTGGCCGCCAGGAGCGGGACCAGAAG

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>RG230260 representing NM_001178008
 Red=Cloning site Green=Tags(s)

MPSETPQAEVGP TGCPHRSGPHSAKGSLEKSPEDKEAKEPLWIRPDAPSRTCWQLGRPASESPHHHTAP
 AKSPKILPDILKKIGDTPMVRINKIGKKFGLKCELLAKCEFFNAGGSVKDRISLRMIEDAERDGLKPGD
 TIIPTSNTGIGLALAAVRGYRCIIVMPEKMSSEKVDVLRALGAEIVRTPNARFDSPEHSVGVAVRWL
 KNEIPNSHILDQYRNASNPLAHYDDEILQQCDGKLDMLVASVGTGGTITGIARKLKEKCPGCRIGV
 DPEGSILAEPEELNQTEQTTVEVEGIGYDFIPTVLDRTVVDKWFKSNDEEAFTFARMLIAQEGLLCGGSA
 GSTVAVAVKAAQELQEQRCVVILPDSVRNYMTKFLSDRWMLQKGFLEEDL TEKKPWWWHLRVQELGLS
 APLTVLPTITCGHTIEILREKGFDPVVEAGVILGMVTLGNMLSSLLAGKVQPSDQVGKVIYQFKQI
 RLTDLTLGRLSHILEMDHFALVVHEQIQYHSTGKSSQRQMVFGVVT AIDL LNFVAAQERDQK

TRTRPLE – GFP Tag – V

Restriction Sites:

Sgfl-MluI

ACCN:	NM_001178008
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:	<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:	NM_001178008.2
RefSeq Size:	2586 bp
RefSeq ORF:	1656 bp
Locus ID:	875
UniProt ID:	P35520
Cytogenetics:	21q22.3
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]