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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)

ORF Nucleotide Sequence:

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

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGCCTTCTGAGACCCCCCAGGCAGAAGTGGGGCCCACAGGCTGCCCCCACCGCTCAGGGCCACACTCGG
CGAAGGGGAGCCTGGAGAAGGGGTCCCCAGAGGATAAGGAAGCCAAGGAGCCCCTGTGGATCCGGCCCGA
TGCTCCGAGCAGGTGCACCTGGCAGCTGGGCCGGCCTGCCTCCGAGTCCCCACATCACCACACTCCCCCG
GCAAAATCTCCAAAAATCTTGCCAGATATTCTGAAGAAAATCGGGGACACCCCTATGGTCAGAATCAACA
AGATTGGGAAGAAGTTCGGCCTGAAGTGTGAGCTCTTGGCCAAGTGTGAGTTCTTCAACGCGGGCGGGAG
CGTGAAGGACCGCATCAGCCTGCGGATGATTGAGGATGCTGAGCGCGACGGGACGCTGAAGCCCGGGGAC
ACGATTATCGAGCCGACATCCGGGAACACCGGGATCGGGCTGGCCCTGGCTGCGGCAGTGAGGGGCTATC
GCTGCATCATCGTGATGCCAGAGAAGATGAGCTCCGAGAAGGTGGACGTGCTGCGGGCACTGGGGGCTGA
GATTGTGAGGACGCCCACCAATGCCAGGTTCGACTCCCCGGAGTCACACGTGGGGGTGGCCTGGCGGCTG
AAGAACGAAATCCCCAATTCTCACATCCTAGACCAGTACCGCAACGCCAGCAACCCCCTGGCTCACTACG
ACACCACCGCTGATGAGATCCTGCAGCAGTGTGATGGGAAGCTGGACATGCTGGTGGCTTCAGTGGGCAC
GGGCGGCACCATCACGGGCATTGCCAGGAAGCTGAAGGAGAAGTGTCCTGGATGCAGGATCATTGGGGTG
GATCCCGAAGGGTCCATCCTCGCAGAGCCGGAGGAGCTGAACCAGACGGAGCAGACAACCTACGAGGTGG
AAGGGATCGGCTACGACTTCATCCCCACGGTGCTGGACAGGACGGTGGTGGACAAGTGGTTCAAGAGCAA
CGATGAGGAGGCGTTCACCTTTGCCCGCATGCTGATCGCGCAAGAGGGGCTGCTGTGCGGTGGCAGTGCT
GGCAGCACGGTGGCGGTGGCCGTGAAGGCCGCGCAGGAGCTGCAGGAGGGCCAGCGCTGCGTGGTCATTC
TGCCCGACTCAGTGCGGAACTACATGACCAAGTTCCTGAGCGACAGGTGGATGCTGCAGAAGGGCTTTCT
GAAGGAGGAGGACCTCACGGAGAAGAAGCCCTGGTGGTGGCACCTCCGTGTTCAGGAGCTGGGCCTGTCA
GCCCCGCTGACCGTGCTCCCGACCATCACCTGTGGGCACACCATCGAGATCCTCCGGGAGAAGGGCTTCG
ACCAGGCGCCCGTGGTGGATGAGGCGGGGGTAATCCTGGGAATGGTGACGCTTGGGAACATGCTCTCGTC
CCTGCTTGCCGGGAAGGTGCAGCCGTCAGACCAAGTTGGCAAAGTCATCTACAAGCAGTTCAAACAGATC
CGCCTCACGGACACGCTGGGCAGGCTCTCGCACATCCTGGAGATGGACCACTTCGCCCTGGTGGTGCACG
AGCAGATCCAGTACCACAGCACCGGGAAGTCCAGTCAGCGGCAGATGGTGTTCGGGGTGGTCACCGCCAT
TGACTTGCTGAACTTCGTGGCCGCCCAGGAGCGGGACCAGAAG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

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

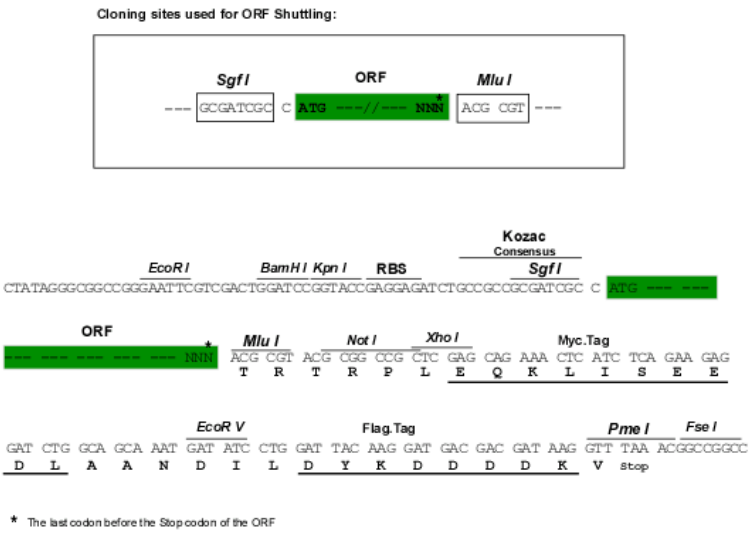
MPSETPQAEVGPTGCPHRSGPHSAKGSLEKGSPEDKEAKEPLWIRPDAPSRCTWQLGRPASESPHHHTPP
AKSPKILPDILKKIGDTPMVRINKIGKKFGLKCELLAKCEFFNAGGSVKDRISLRMIEDAERDGTLKPGD
TIIEPTSGNTGIGLALAAAVRGYRCIIVMPEKMSSEKVDVLRALGAEIVRTPTNARFDSPESHVGVAWRL
KNEIPNSHILDQYRNASNPLAHYDTTADEILQQCDGKLDMLVASVGTGGTITGIARKLKEKCPGCRIIGV
DPEGSILAEPEELNQTEQTTYEVEGIGYDFIPTVLDRTVVDKWFKSNDEEAFTFARMLIAQEGLLCGGSA
GSTVAVAVKAAQELQEGQRCVVILPDSVRNYMTKFLSDRWMLQKGFLKEEDLTEKKPWWWHLRVQELGLS
APLTVLPTITCGHTIEILREKGFDQAPVVDEAGVILGMVTLGNMLSSLLAGKVQPSDQVGKVIYKQFKQI
RLTDTLGRLSHILEMDHFALVVHEQIQYHSTGKSSQRQMVFGVVTAIDLLNFVAAQERDQK

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

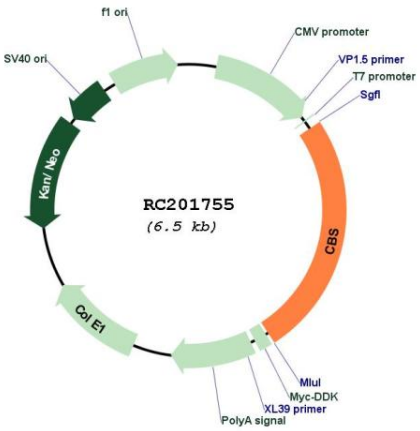
RefSeq Size: 2609 bp

RefSeq ORF: 1656 bp

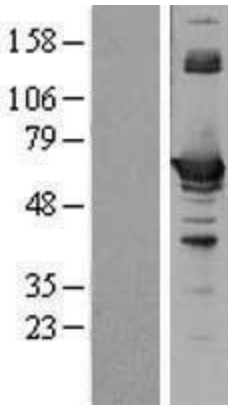
Locus ID: 875

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 (CBSD), 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]

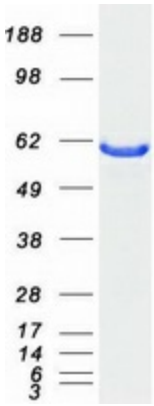
Product images:



Circular map for RC201755



Western blot validation of overexpression lysate (Cat# [LY400017]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected 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]).