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Product datasheet for RG210522

hCAP D3 (NCAPD3) (NM_015261) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	hCAP D3 (NCAPD3) (NM_015261) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	hCAP D3
Synonyms:	CAP-D3; CAPD3; hCAP-D3; hcp-6; hHCP-6; MCPH22
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)

ORF Nucleotide Sequence:

>RG210522 ORF sequence, codon optimized.
Due to the complexity of NM_015261, the ORF clone is codon optimized for mammalian Expression.
The nucleotide sequence differs from the reference sequence, yet the amino acid sequence remains identical.

Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGTGGCGTTGCGGGGCCTTGGTAGCGGCCTGCAGCCCTGGTGTCCGCTGGATCTTAGACTCGAATGGG
TTGACACAGTGTGGGAACTGGATTTCACAGAGACTGAGCCTTTGGATCCCAGCATAGAAGCAGAGATCAT
AGAGACTGGATTGGCTGCATTCACAAAACTCTATGAAAGCCTTTTACCCTTTGCTACTGGAGAACATGGA
TCTATGGAGAGTATCTGGACCTTCTTCATTGAGAACAATGTTTCCCATAGTACACTGGTGGCATTGTTCT
ATCATTTTGTTCAAATAGTTCATAAGAAGAATGTCAGTGTACAGTATCGAGAATATGGCCTTCATGCCGC
TGGGCTTTACTTTTTGCTACTAGAAGTACCAGGCAGTGTAGCCAATCAAGTATTCCACCCAGTGATGTTT
GACAAATGCATTCAGACTCTAAAGAAGAGCTGGCCCCAGGAATCTAACTTGAATCGGAAAAGAAAGAAAG
AACAGCCTAAGAGCTCTCAGGCTAACCCCGGGAGGCATAGAAAAAGGGGAAAGCCACCCAGGAGAGAAGA
TATTGAGATGGATGAAATTATAGAAGAACAAGAAGATGAGAATATTTGTTTTTCTGCCCGGGACCTTTCT
CAAATTCGAAATGCCATCTTTCACCTTTTAAAGAATTTTTTAAGGCTTCTGCCAAAGTTTTCCTTGAAAG
AAAAGCCACAATGTGTACAGAATTGTATAGAGGTCTTTGTTTCATTAACTAATTTTGAGCCAGTTCTTCA
TGAATGTCATGTTACACAAGCCAGAGCTCTTAACCAAGCAAAATACATACCAGAACTGGCTTATTATGGA
TTGTATTTGCTGTGCTCTCCCATTCATGGAGAAGGAGATAAGGTCATCAGTTGTGTTTTCCATCAAATGC
TCAGTGTAATATTAATGTTAGAAGTTGGTGAAGGATCCCATCGTGCCCCCCTTGCTGTTACCTCCCAAGT
CATCAACTGTAGAAACCAGGCGGTCCAGTTTATCAGCGCCCTTGTGGATGAATTAAAGGAGAGTATATTC
CCAGTCGTCCGTATCTTACTGCAGCACATCTGTGCCAAGGTGGTAGATAAATCAGAGTATCGTACTTTTG

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CAGCCCAGTCCCTAGTCCAGCTGCTCAGTAAACTTCCTTGTGGGGAATACGCTATGTTCATTGCCTGGCT
TTACAAATACTCCCGAAGTTCCAAGATCCCACACCGGGTTTTTACTCTTGATGTTGTCTTAGCTCTGTTA
GAACTGCCTGAAAGAGAGGTGGATAACACCCTCTCCTTGGAGCATCAGAAGTTCTTAAAGCATAAGTTCC
TGGTGCAGGAAATTATGTTTGATCGTTGCTTAGACAAGGCGCCTACTGTCCGCAGCAAGGCACTGTCCAG
CTTTGCACACTGTCTGGAGTTGACTGTTACCAGTGCGTCGGAGAGTATCCTGGAGCTCCTGATTAACAGT
CCTACGTTTTCTGTAATAGAGAGTCACCCTGGTACCTTACTGAGAAATTCATCAGCTTTTTCCTACCAAA
GGCAGACATCTAACCGTTCCGAACCCTCAGGGGAGATCAACATAGACAGCAGTGGTGAAACAGTTGGATC
TGGAGAAAGATGTGTCATGGCAATGCTGAGAAGGAGGATCAGGGATGAGAAGACCAACGTTAGGAAGTCT
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TGCAGGACCAGTGTCGGGACCCTGCAGTGTCTGTCCGGAAGCAGGCCCTCCAGTCTCTTACTGAACTCCT
TATGGCTCAGCCTAGATGCGTGCAGATCCAGAAAGCCTGGTTGCGGGGGGTGGTCCCGGTGGTGATGGAC
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TCGAATGGCGAGATTGAGCACGTGACCAAGCGGGCCATCAGCACCCCCGAGAAGAGCATCAGTGATGTCA
CGTTTGGAGCAGGGGTCAGTTACATCGGGACACCACGGACTCCGTCGTCAGCCAAAGAGAAAATTGAAGG
CCGGAGTCAAGGAAATGACATCTTATGTTTATCACTGCCTGATAAACCGCCCCCACAGCCTCAGCAGTGG
AATGTGCGGTCTCCCGCCAGGAATAAAGACACTCCAGCCTGCAGCAGGAGGTCCCTCCGAAAGACCCCTC
TGAAAACAGCCAAC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

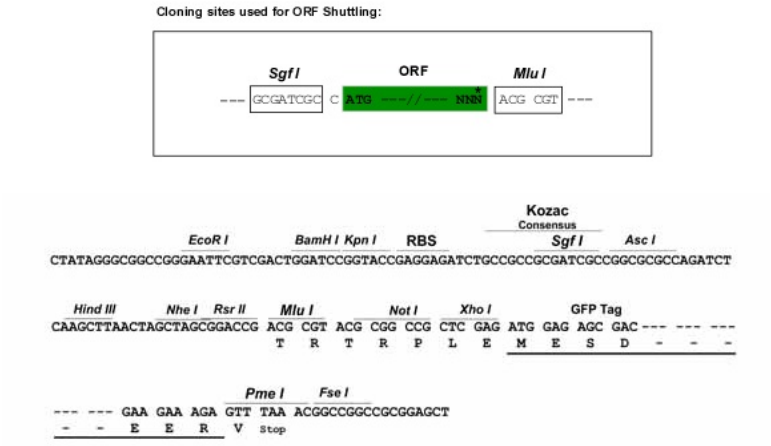
>RG210522 representing NM_015261
Red=Cloning site Green=Tags(s)

MVALRGLGSGLQPWCPLDLRLEWVDTVWELDFTETEPLDPSIEAEIIETGLAAFTKLYESLLPFATGEHG
SMESIWTFFIENNVSHSTLVALFYHFVQIVHKKNVSVQYREYGLHAAGLYFLLLEVPGSVANQVFHPVMF
DKCIQTLKKSWPQESNLNRKRKKEQPKSSQANPGRHRKRGKPPRREDIEMDEIIEEQEDENICFSARDLS
QIRNAIFHLLKNFLRLLPKFSLKEKPQCVQNCIEVFVSLTNFEPVLHECHVTQARALNQAKYIPELAYYG
LYLLCSPIHGEGDKVISCVFHQMLSVILMLEVGEGSHRAPLAVTSQVINCRNQAVQFISALVDELKESIF
PVVRILLQHICAKVVDKSEYRTFAAQSLVQLLSKLPCGEYAMFIAWLYKYSRSSKIPHRVFTLDVVLALL
ELPEREVDNTLSLEHQKFLKHKFLVQEIMFDRCLDKAPTVRSKALSSFAHCLELTVTSASESILELLINS
PTFSVIESHPGTLLRNSSAFSYQRQTSNRSEPSGEINIDSSGETVGSGERCVMAMLRRRIRDEKTNVRKS
ALQVLVSILKHCDVSGMKEDLWILQDQCRDPAVSVRKQALQSLTELLMAQPRCVQIQKAWLRGVVPVVMD
CESTVQEKALEFLDQLLLQNIRHHSHFHSGDDSQVLAWALLTLLTTESQELSRYLNKAFHIWSKKEKFSP
TFINNVISHTGTEHSAPAWMLLSKIAGSSPRLDYSRIIQSWEKISSQQNPNSNTLGHILCVIGHIAKHLP
KSTRDKVTDAVKCKLNGFQWSLEVISSAVDALQRLCRASAETPAEEQELLTQVCGDVLSTCEHRLSNIVL
KENGTGNMDEDLLVKYIFTLGDIAQLCPARVEKRIFLLIQSVLASSADADHSPSSQGSSEAPASQPPPQV
RGSVMPSVIRAHAIITLGKLCLQHEDLAKKSIPALVRELEVCEDVAVRNNVIIVMCDLCIRYTIMVDKYI
PNISMCLKDSDPFIRKQTLILLTNLLQEEFVKWKGSLFFRFVSTLIDSHPDIASFGEFCLAHLLLKRNPV
MFFQHFIECIFHFNNYEKHEKYNKFPQSEREKRLFSLKGKSNKERRMKIYKFLLEHFTDEQRFNITSKIC
LSILACFADGILPLDLDASELLSDTFEVLSSKEIKLLAMRSKPDKDLLMEEDDMALANVVMQEAQKKLIS
QVQKRNFIENIIPIIISLKTVLEKNKIPALRELMHYLREVMQDYRDELKDFFAVDKQLASELEYDMKKYQ
EQLVQEQELAKHADVAGTAGGAEVAPVAQVALCLETVPVPAGQENPAMSPAVSQPCTPRASAGHVAVSSP
TPETGPLQRLLPKARPMSLSTIAILNSVKKAVESKSRHRSRSLGVLPFTLNSGSPEKTCSQVSSYSLEQE
SNGEIEHVTKRAISTPEKSISDVTFGAGVSYIGTPRTPSSAKEKIEGRSQGNDILCLSLPDKPPPQPQQW
NVRSPARNKDTPACSRRSLRKTPLKTAN

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:

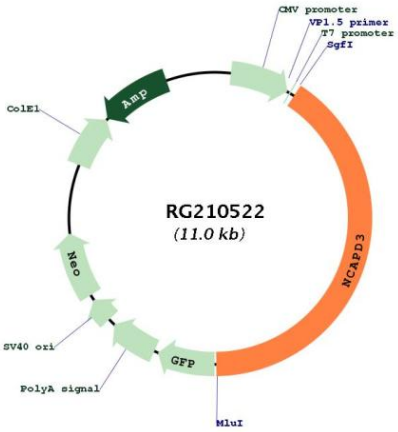


ACCN: NM_015261

ORF Size: 4494 bp

OTI Disclaimer:	Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery. 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.
RefSeq:	NM_015261.3
RefSeq Size:	5661 bp
RefSeq ORF:	4497 bp
Locus ID:	23310
UniProt ID:	P42695
Cytogenetics:	11q25
Gene Summary:	Condensin complexes I and II play essential roles in mitotic chromosome assembly and segregation. Both condensins contain 2 invariant structural maintenance of chromosome (SMC) subunits, SMC2 (MIM 605576) and SMC4 (MIM 605575), but they contain different sets of non-SMC subunits. NCAPD3 is 1 of 3 non-SMC subunits that define condensin II (Ono et al., 2003 [PubMed 14532007]).[supplied by OMIM, Mar 2008]

Product images:



Circular map for RG210522