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Product datasheet for RC200296

COX4NB (EMC8) (NM_006067) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	COX4NB (EMC8) (NM_006067) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	COX4NB
Synonyms:	C16orf2; C16orf4; COX4NB; FAM158B; NOC4
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>RC200296 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGCCCGGGGTGAAACTGACCACCCAGGCCTACTGCAAGATGGTGCTGCACGGCGCCAAGTACCCGCACT
GCGCCGTCAACGGGCTCCTGGTGGCCGAGAAGCAGAAGCCGCGTAAGGAGCACCTCCCCCTGGGCGGCCC
CGGCGCCCACCACACCCTCTTCGTGGACTGCATCCCCCTCTTCCACGGCACCCTGGCCCTCGCCCCCATG
CTGGAGGTGGCTCTCACCCTGATTGATTCATGGTGCAAAGATCATAGCTACGTGATTGCTGGTTATTATC
AAGCTAATGAGCGAGTAAAGGATGCCAGTCCAAACCAGGTTGCAGAGAAGGTGGCCTCCAGAATCGCCGA
GGGCTTCAGCGACACTGCGCTCATCATGGTAGACAACACCAAGTTTACGATGGACTGCGTAGCGCCTACG
ATCCACGTGTACGAGCACCATGAGAACAGATGGCGGTGCAGAGACCCACACCATGACTACTGTGAAGACT
GGCCAGAGGCACAGAGGATCTCAGCCTCGCTCCTGGACAGCCGGTCCTACGAGACGCTCGTGGATTTCGA
TAACCACCTGGATGACATTCGGAATGACTGGACAAACCCAGAGATCAATAAAGCTGTCCTACACTTGTGC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC200296 protein sequence
Red=Cloning site Green=Tags(s)

MPGVKLTTQAYCKMVLHGAKYPHCAVNGLLVAEKQKPRKEHLPLGGPGAHHTLFVDCIPLFHGTLALAPM
LEVALTLIDSWCKDHSYVIAGYYQANERVKDASPNQVAEKVASRIAEGFSDTALIMVDNTKFTMDCVAPT
IHVYEHHENRWRCRDPHHDYCEDWPEAQRISASLLDSRSYETLVDFDNHLDDIRNDWTNPEINKAVLHLC

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

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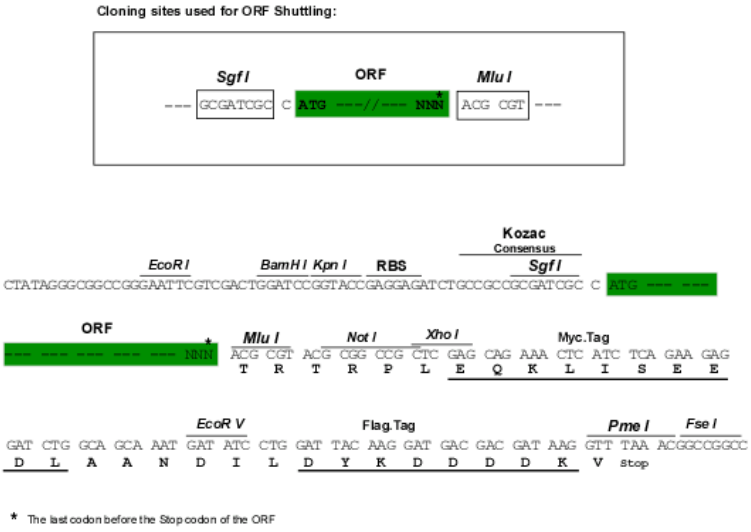
Chromatograms: https://cdn.origene.com/chromatograms/mk6385_b04.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_006067

ORF Size: 630 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.

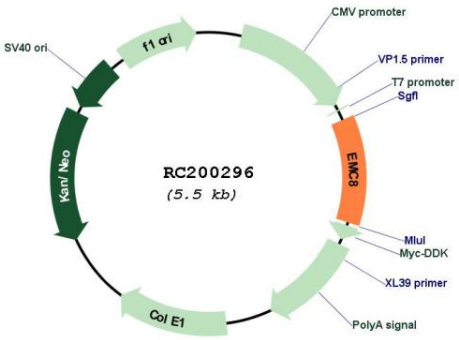
Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: NM_006067.5

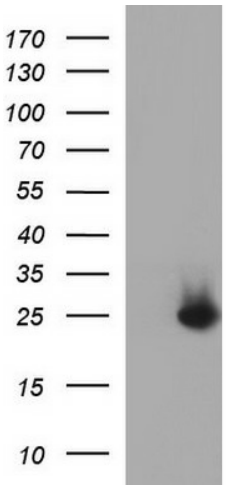
RefSeq Size: 1964 bp

RefSeq ORF:	633 bp
Locus ID:	10328
UniProt ID:	O43402
Cytogenetics:	16q24.1
Domains:	UPF0172
MW:	23.8 kDa
Gene Summary:	Part of the endoplasmic reticulum membrane protein complex (EMC) that enables the energy-independent insertion into endoplasmic reticulum membranes of newly synthesized membrane proteins (PubMed:30415835, PubMed:29809151, PubMed:29242231, PubMed:32459176, PubMed:32439656). Preferentially accommodates proteins with transmembrane domains that are weakly hydrophobic or contain destabilizing features such as charged and aromatic residues (PubMed:30415835, PubMed:29809151, PubMed:29242231). Involved in the cotranslational insertion of multi-pass membrane proteins in which stop-transfer membrane-anchor sequences become ER membrane spanning helices (PubMed:30415835, PubMed:29809151). It is also required for the post-translational insertion of tail-anchored/TA proteins in endoplasmic reticulum membranes (PubMed:29809151, PubMed:29242231). By mediating the proper cotranslational insertion of N-terminal transmembrane domains in an N-exo topology, with translocated N-terminus in the lumen of the ER, controls the topology of multi-pass membrane proteins like the G protein-coupled receptors (PubMed:30415835). By regulating the insertion of various proteins in membranes, it is indirectly involved in many cellular processes (Probable). [UniProtKB/Swiss-Prot Function]

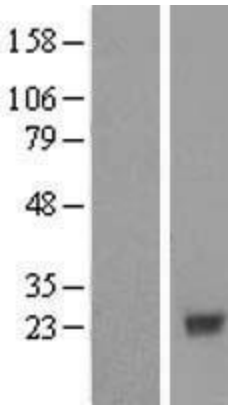
Product images:



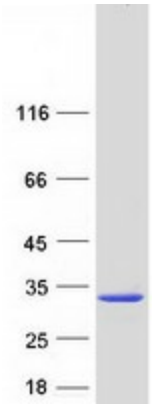
Circular map for RC200296



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY COX4NB (Cat# RC200296, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-COX4NB(Cat# [TA507109]). Positive lysates [LY416880] (100ug) and [LC416880] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY416880]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC200296 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified EMC8 protein (Cat# [TP300296]). The protein was produced from HEK293T cells transfected with EMC8 cDNA clone (Cat# RC200296) using MegaTran 2.0 (Cat# [TT210002]).