

## Product datasheet for **MR201640**

### Vps29 (NM\_019780) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Tag:	Myc-DDK
Symbol:	Vps29
Synonyms:	2010015D08Rik; AW049835; PEP11
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

**ORF Nucleotide Sequence:** >MR201640 ORF sequence  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTGCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCCGCGATCGCC

ATGTTGGTGTGGTACTAGGAGATCTGCACATTCGCGACCGGTGCAACAGCCTGCCGGCCAAGTTAAAA  
AACTCCTGGTGCCAGGAAAAATCCAGCACATCCTCTGCACCGGCAACCTCTGCACCAAGGAGAGCTACGA  
CTATCTCAAGACTCTGGCTGGCGAGCTCCACATCGTGAGAGGAGACTTCGATGAGAATCTGAATTACCCA  
GAACAAAAGGTTGTGACTGTGGGCCAGTTCAAGATCGGTCTGATTACGGACACCAAGTTATTCGGTGGG  
GAGACATGGCTAGCTTAGCCCTGCTGCAGAGGCAGTTTGATGTGGACATTCCTATCTCAGGACACACACA  
CAAAATTTGAAGCATTTGAGCATGAAAAATAATTCTACATTAACCCAGGTTCTGCCACTGGGGCCTATAAT  
GCCTTGAAACAAACATTATTCATCGTTTGTGCTGATGGACATCCAGGCTTCTACTGTGGTCACTTACG  
TTTATCAACTAATTGGAGATGACGTCAAAGTAGAACGAATTGAGTATAAAAAGTCG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >MR201640 protein sequence  
Red=Cloning site Green=Tags(s)

MLVLVLGDLHIPHCNSLPAKFKLLVPGKIQHILCTGNLCTKESYDYLKTLAGDVHIVRGDFDENLNP  
EQKVVTVGQFKIGLIHGHQVIPWGDMAALLQRQFDVDILISGHTHKFEAFEHENKFYINPGSATGAYN  
ALETNIIPSFVLMIDIQASTVVTVVYQLIGDDVKVERIEYKKS

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:** SgfI-MluI



## Cloning Scheme:



ACCN: NM\_019780

ORF Size: 546 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\\_019780.1](#), [NP\\_062754.1](#)

RefSeq Size: 991 bp

**RefSeq ORF:** 549 bp

**Locus ID:** 56433

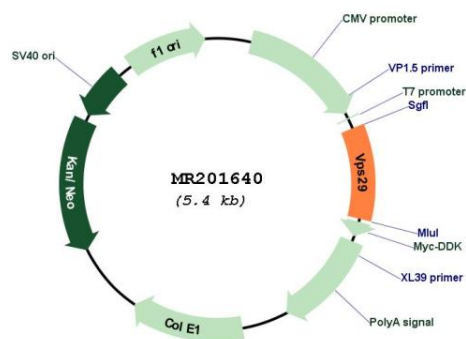
**UniProt ID:** [Q9QZ88](#)

**Cytogenetics:** 5 F

**MW:** 20.5 kDa

**Gene Summary:** Acts as component of the retromer cargo-selective complex (CSC). The CSC is believed to be the core functional component of retromer or respective retromer complex variants acting to prevent missorting of selected transmembrane cargo proteins into the lysosomal degradation pathway. The recruitment of the CSC to the endosomal membrane involves RAB7A and SNX3. The SNX-BAR retromer mediates retrograde transport of cargo proteins from endosomes to the trans-Golgi network (TGN) and is involved in endosome-to-plasma membrane transport for cargo protein recycling. The SNX3-retromer mediates the retrograde endosome-to-TGN transport of WLS distinct from the SNX-BAR retromer pathway. The SNX27-retromer is believed to be involved in endosome-to-plasma membrane trafficking and recycling of a broad spectrum of cargo proteins. The CSC seems to act as recruitment hub for other proteins, such as the WASH complex and TBC1D5. Required to regulate transcytosis of the polymeric immunoglobulin receptor (pIgR-pIgA) (By similarity). Acts also as component of the retriever complex. The retriever complex is a heterotrimeric complex related to retromer cargo-selective complex (CSC) and essential for retromer-independent retrieval and recycling of numerous cargos such as integrin alpha-5/beta-1 (ITGA5:ITGB1). In the endosomes, retriever complex drives the retrieval and recycling of NxxY-motif-containing cargo proteins by coupling to SNX17, a cargo essential for the homeostatic maintenance of numerous cell surface proteins associated with processes that include cell migration, cell adhesion, nutrient supply and cell signaling. The recruitment of the retriever complex to the endosomal membrane involves CCC and WASH complexes. Involved in GLUT1 endosome-to-plasma membrane trafficking; the function is dependent of association with ANKRD27 (By similarity). Has no activity towards p-nitrophenylphosphate, p-nitrophenylphosphorylcholine or phosphatidylinositolphosphates or a phosphorylated peptide derived from retromer cargo (in vitro) (PubMed:21629666, PubMed:15965486).[UniProtKB/Swiss-Prot Function]

## Product images:



Circular map for MR201640