

Product datasheet for **SC318400**

SMCR8 (NM_144775) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	SMCR8 (NM_144775) Human Untagged Clone
Tag:	Tag Free
Symbol:	SMCR8
Synonyms:	DENND8A
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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Fully Sequenced ORF: >SC318400 representing NM_144775.
 Blue=Insert sequence Red=Cloning site Green=Tag(s)

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GCTCGTTTAGTGAACCGTCAGAATTTTGTAAACGACTCACTATAGGGCGGCCGGGAATTCGTGCACTG
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TACAAGGATGACGACGATAAGGTTTAAACGGCCGCGC
  
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Restriction Sites: SgfI-MluI
ACCN: NM_144775

Insert Size:	2814 bp
OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
OTI Annotation:	This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.
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:	<u>NM_144775.2</u>
RefSeq Size:	8327 bp
RefSeq ORF:	2814 bp
Locus ID:	140775
UniProt ID:	<u>Q8TEV9</u>
Cytogenetics:	17p11.2
MW:	105 kDa
Gene Summary:	Component of the C9orf72-SMCR8 complex, a complex that has guanine nucleotide exchange factor (GEF) activity and regulates autophagy (PubMed:20562859, PubMed:27193190, PubMed:27103069, PubMed:27559131, PubMed:27617292, PubMed:28195531). In the complex, C9orf72 and SMCR8 probably constitute the catalytic subunits that promote the exchange of GDP to GTP, converting inactive GDP-bound RAB8A and RAB39B into their active GTP-bound form, thereby promoting autophagosome maturation (PubMed:20562859, PubMed:27103069, PubMed:27617292, PubMed:28195531). The C9orf72-SMCR8 complex also acts as a negative regulator of autophagy initiation by interacting with the ATG1/ULK1 kinase complex and inhibiting its protein kinase activity (PubMed:27617292, PubMed:28195531). Acts as a regulator of mTORC1 signaling by promoting phosphorylation of mTORC1 substrates (PubMed:27559131, PubMed:28195531). In addition to its activity in the cytoplasm within the C9orf72-SMCR8 complex, SMCR8 also localizes in the nucleus, where it associates with chromatin and negatively regulates expression of suppresses ULK1 and WIP1 genes (PubMed:28195531).[UniProtKB/Swiss-Prot Function]