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Product datasheet for RC210082

DSU (MREG) (NM_018000) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	DSU (MREG) (NM_018000) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	DSU
Synonyms:	DSU; WDT2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC210082 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s) TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC GCCGCGATCGCC ATGGGGCTGAGGGACTGGCTGAGAACCGTGTGCTGCTGCTGCCGGTGCGAGTGCTTGGAGGAGCGCGCCC TGCCTGAGAAGGAGCCCCTCGTCAGTGATAACAATCCATATTCCTCATTTGGAGCAACTCTGGTGAGGGA TGATGAGAAGAATTTATGGAGTATGCCCCATGATGTGTCCCACACAGAGGCAGACGACGACAGAACCCTG TACAATTTGATAGTCATTCGTAATCAGCAGGCCAAAGACTCAGAGGAGTGGCAGAAGCTCAACTATGATA TCCATACCCTGCGGCAGGTTCGAAGGGAAGTAAGAAACAGATGGAAGTGCATCTTAGAAGATTTAGGTTT TCAAAAGGAAGCTGACTCTTTGTTGTCAGTGACTAAACTCAGCACCATCAGTGATTCTAAAAACACAAGG AAAGCTCGAGAGATGTTGTTAAAACTGGCTGAAGAAACCAATATTTTCCCAACAAGTTGGGAGCTCTCAG AGAGATATCTCTTTGTTGTGGACCGTCTCATTGCACTTGATGCTGCAGAAGAGTTCTTTAAGCTTGCTCG TCGAACTTACCCCAAGAAGCCTGGGGTTCCATGCCTGGCAGATGGCCAGAAAGAACTGCACTACCTTCCG TTTCCAAGTCCC ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT ACAAGGATGACGACGATAAGGTTTAA

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Protein Sequence:

>RC210082 protein sequence
Red=Cloning site Green=Tags(s)

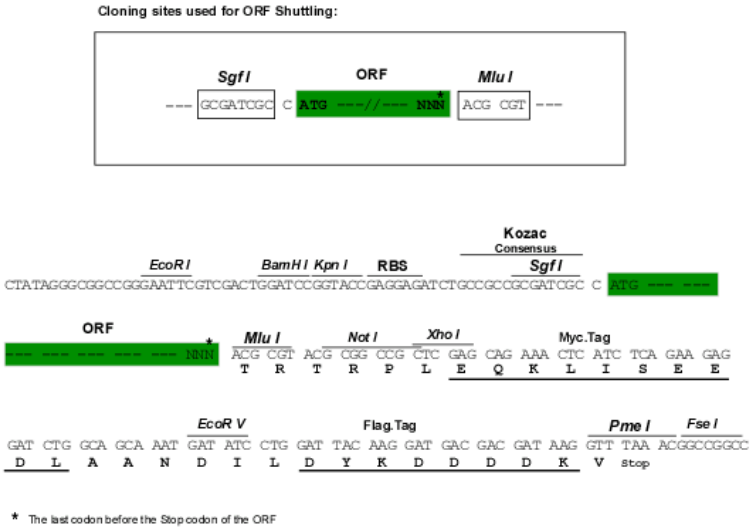
MGLRDWLRTVCCCCRCECLEERALPEKEPLVSDNNPYSSFGATLVRDDEKNLWSMPHDVSHTEADDDRTL
YNLIVIRNQQAKDSEEWQKLNYDIHTLRQVRREVRNRWKCILEDLGFQKEADSLLSVTKLSTISDSKNTR
KAREMLLKLAEETNIFPTSWELSERYLFVVDRLIALDAAEEFFKLARRTYPKKPGVPCLADGQKELHYLP
FPSP

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6366_a12.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_018000

ORF Size: 642 bp

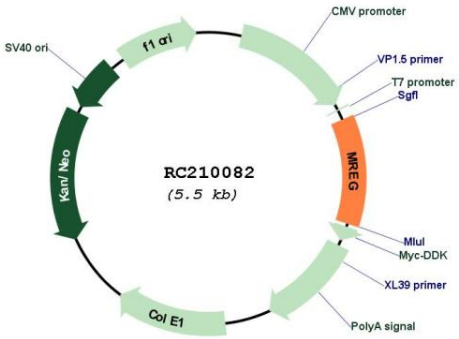
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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.

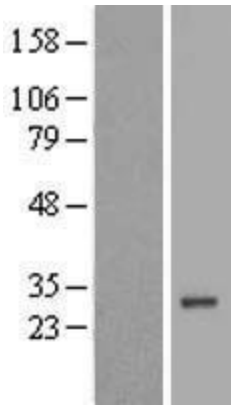
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

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_018000.2, NP_060470.2
RefSeq Size:	3213 bp
RefSeq ORF:	645 bp
Locus ID:	55686
UniProt ID:	Q8N565
Cytogenetics:	2q35
MW:	25 kDa
Gene Summary:	Probably functions as cargo-recognition protein that couples cytoplasmic vesicles to the transport machinery. Plays a role in hair pigmentation, a process that involves shedding of melanosome-containing vesicles from melanocytes, followed by phagocytosis of the melanosome-containing vesicles by keratinocytes. Functions on melanosomes as receptor for RILP and the complex formed by RILP and DCTN1, and thereby contributes to retrograde melanosome transport from the cell periphery to the center. Overexpression causes accumulation of late endosomes and/or lysosomes at the microtubule organising center (MTOC) at the center of the cell. Probably binds cholesterol and requires the presence of cholesterol in membranes to function in microtubule-mediated retrograde organelle transport. Binds phosphatidylinositol 3-phosphate, phosphatidylinositol 4-phosphate, phosphatidylinositol 5-phosphate and phosphatidylinositol 3,5-bisphosphate, but not phosphatidylinositol 3,4-bisphosphate or phosphatidylinositol 4,5-bisphosphate (By similarity). Required for normal phagosome clearing and normal activation of lysosomal enzymes in lysosomes from retinal pigment epithelium cells (PubMed:19240024). Required for normal degradation of the lipofuscin component N-retinylidene-N-retinylethanolamine (A2E) in the eye. May function in membrane fusion and regulate the biogenesis of disk membranes of photoreceptor rod cells (By similarity).[UniProtKB/Swiss-Prot Function]

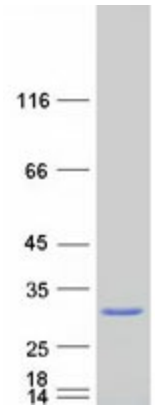
Product images:



Circular map for RC210082



Western blot validation of overexpression lysate (Cat# [LY413391]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC210082 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified MREG protein (Cat# [TP310082]). The protein was produced from HEK293T cells transfected with MREG cDNA clone (Cat# RC210082) using MegaTran 2.0 (Cat# [TT210002]).