

Product datasheet for **RC213090**

USP20 (NM_001008563) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	USP20 (NM_001008563) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	USP20
Synonyms:	hVDU2; LSFR3A; VDU2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide
Sequence:**

>RC213090 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGGGGACTCCAGGACCTTTGCCTCACCTTGACTCCATAGGAGAGGTGACCAAAGAGGACTTGCTGC
 TCAATCTAAGGGAACCTGTGAGTCGTGTGGGGTACCAGACCAAACCTATGGCCGTGTCTGCAGTTGC
 CTGCCCTATGTTGGCTGCGGAGAATCCTTCGCTGACCACAGCACCATTTCATGCACAGGCAAAAAAGCAC
 AACTTGACCGTGAACCTGACCACGTTCCGACTGTGGTGTACGCCTGTGAGAAGGAGGTATTCTGGAGC
 AGCGGCTGGCAGCCCTCTGCTGGGCTCCTCTTCAAGTTCTCTGAACAGGACTCCCGCCACCCTCCCA
 CCCTCTGAAAGCTGTTCTATTGCTGTGGCTGATGAAGGAGAGTCTGAGTCAGAGGATGATGACCTGAAA
 CCTCGAGGCCACCGGCATGAAGAACCTCGGAACTCCTGCTACATGAACGCCGCCCTGCAGGCCCTGT
 CCAATTGCCCGCGCTGACTCAGTTCTTCTGGAGTGTGGCGCCCTGGTGCACAGATAAGAAGCCAGC
 CCTGTGAAGAGTACCAGAAGCTGGTCTCTGAGGTCTGGCATAAGAAACGGCCAAGCTACGTGGTCCCC
 ACCAGTCTGTCTCATGGGATCAAGTTGGTCAACCCAATGTTCCGAGGCTATGCCAGCAGGACACCCAAG
 AGTTCTTCGCTGCCTGATGGACAGCTGCACGAGGAGCTCAAGGAGCCGGTGGTGGCCACGGTGGCGCT
 GACGGAGGCTCGGGACTCAGATTCGAGTGACACGGATGAGAAACGGGAGGGTACCGGAGCCATCAGAA
 GATGAGTTCTTGTCTGTGACTCGAGCAGTGACCGGGGTGAGGGTACCGGCAGGGGCGTGGCGGGGCA
 GCTCGCAGGCCGAGACGGAGCTGCTGATCCCAGATGAGGCGGGCCGAGCCATCTCTGAGAAGGAGCGGAT
 GAAGGACCGCAAGTTCTCTGGGGCCAGCAGCGTACAACTCGGAGCAAGTGACGAGGACGCTGATGTG
 GACACTGCCATGGCTGCCCTTGACCAGCCCGGAGGCCAGCCCGTACCACGGTCTCCAGCCCT
 GCCGAGCCAGAGCCGGACAATGATGCTCACCTACGCAGTCTCTCGCCCTGCAGCCCGTCCACCA
 CCACGAGGGCCATGCCAAGCTGTCTAGCAGCCCCCTCGTGCAAGCCCGTGAGGATGGCACCCGTGCTAC
 GTGCTCAAGAAAGCCAGGTATTGAGTGTGGCAGCCGAGGCGAAGGAGCAGCGCTACCGCAGCGTCA
 TCTCAGACATCTTTGACGGCTCCATTCTCAGCCTCGTGCAGTGTCTCACCTGTGACCGGGTATCCACCAC
 AGTGAAACGTTCCAGGACTTACTACTGCCATTCTGAAAGGAGGACCTGGCCAAGCTCCATTAGCC
 ATCTACCAGAATGTGCCGGCCAAGCCAGGCGCTGTGGGACAGCTATGCCGCCAGGGTGGCTGGCT
 TCATTGTGGAGTACATCCGACGGTTTGTGGTATCCTGTACCCCGAGTGGTTTTGGGGCCTGTCGTAC
 CCTGGAAGACTGCCTTGTGCCTTCTTTGCCGCTGATGAGTTAAAGGGTGACAACATGTACAGCTGTGAG
 CGGTGTAAGAAGCTGCGGAACGGAGTGAAGTACTGCAAAGTCTCGGTTGCCCGAGATCCTGTGCATTC
 ACCTAAAGCGCTTTCGGCACGAGGTGATGACTATTCAAGATCAACAGCCACGTCTCTCCCCCTCGA
 GGGGCTCGACCTGCGCCCTTCTTGC AAGGAGTGCACATCCCAGATCACCCACTACGACCTCCTCTCG
 GTCATCTGCCACCACGGCAGGCAGGACAGTGGGCACTACATCGCCTACTGCCAGAACGTGATCAATGGGC
 AGTGGTACGAGTTTGTGACCACTACGTACAGAAAGTCCACGAGACGGTGGTGCAGAACGCCGAGGGCTA
 CGTACTCTTACAGGAAGAGCAGCGAGGAGGCCATGCGGGAGCGACAGCAGGTGGTGTCCCTGGCCGCC
 ATGCGGGAGCCCAGCCTGCTGCGGTTCTACGTGTCCCGGAGTGGCTCAACAAGTTCAACACCTTCGCGG
 AGCCAGGCCCATCACCACAGACCTTCTCTGCTCCACGGAGGCATCCCGCCCAAAATACCACTA
 CATCGACGACCTGGTGGTATCCTGCCCCAGAACGCTCTGGGAGCACCTGTACAACAGATTGCGGGGTGGC
 CCCGCCGTGAACCACCTGTACGTGTCTCCATCTGCCAGGTGGAGATCGAGGCACTGGCCAAGCGCAGGA
 GGATCGAGATCGACACCTTCATCAAGTTGAACAAGGCCTTCCAGGCCGAGGAGTCCCGGGCGTATCTA
 CTGCATCAGCATGCAGTGGTTCGGGAGTGGGAGGCGTTCGTAAGGGGAAGGACAACGAGCCCCCGGG
 CCCATTGACAACAGCAGGATTGCACAGGTCAAAGGAAGCGCCATGTCCAGCTGAAGCAGGGAGCTGACT
 ACGGGCAGATTCGAGGAGACCTGGACCTACCTGAACAGCCTGTATGGAGGTGGCCCCGAGATTGCCAT
 CCGCCAGAGTGTGGCGCAGCCGCTGGGCCAGAGAACCTGCACGGGGAGCAGAAGATCGAAGCCGAGACG
 CGGGCCGTG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC213090 protein sequence
 Red=Cloning site Green=Tags(s)

MGDSRDLCPHLDSIGEVTKEDLLLKSKGTCQSCGVTGPNLWACLQVACPYVGCGESFADHSTIHAQAKKH
 NLTVNL TTFRLWCYACEKEVFLEQRLAAPLLGSSSKFSEQDSPPPSHPLKAVPIA VADEGESESEDDDLK
 PRGLTG MKNLGNSCYMNAALQALSNCPPLTQFFLECGGLVRTDKK PALCKSYQKLVSEVWHKKRPSYVVP
 TSL SHGIKLVNPMFRGYAQQDTQEFRLCLMDQLHEELKEP VVATVAL TEARDSDSSDTDEKREGDRSPSE
 DEF LSCDSSSDRGE GDGQGRGGSSQAETELLIPDEAGRAISEKERMKDRKFSWGQQR TNSEQVDEADAV
 DTAMAALDQPAEAQPPSPRSSPCRTPEPDNDAHLRSSSRPCSPVHHHEGHAKLSSSPPRASPVRMAPSY
 VLKKAQVL SAGSRRRKEQRYRSV ISDFDGSILSLVQCL TCDRVSTTVETFQDLSLPIPGKEDLAKLHSA
 IYQNPAPKPGACGDSYAAQGWLAFIVEYIRRFVVSCTPSWFGP VVTLEDCLAFFAADELKGDNMYSCE
 RCKKL RNVKVKYKVLRLPEILCIHLKFRFRHEVMYSFKINSHVSFPLEGLDLRPFLAKECTSQITTYD LLS
 VICHHTAGSGHYIAYCQNVINGQWYEFDDQYVTEVHETVVQNAEGYVLFYRKSSEEAMRERQV VSLAA
 MREPSLLRFYVSREWLNKFNTFAEPGPITNQTF LCSHG GIPPHKYHYIDDLV VILPQNVWEHLNRF GGG
 PAVNHL YVCSICQVEIEALAKRRRIEIDTFIKLNKAFQAEESPGVIYCISMQWFREWEAFVKGKDNEPPG
 PIDNSRIAQVKSGSHVQLKQGADY GQISEETWY LNSLYGGGPEIAIRQSV AQPLGPENLHGEQKIEAET
 RAV

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6509_b08.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



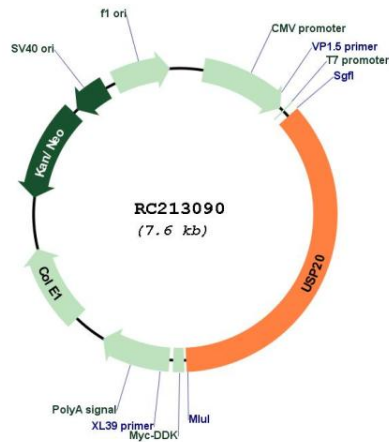
* The last codon before the Stop codon of the ORF

ACCN: NM_001008563

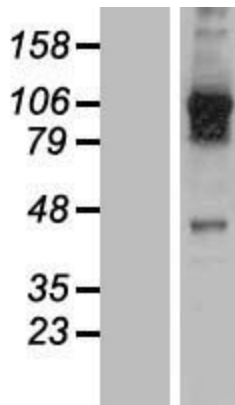
ORF Size: 2739 bp

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:	<ol style="list-style-type: none">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_001008563.2
RefSeq Size:	4459 bp
RefSeq ORF:	2745 bp
Locus ID:	10868
UniProt ID:	Q9Y2K6
Cytogenetics:	9q34.11
Protein Families:	Druggable Genome, Protease
MW:	101.9 kDa
Gene Summary:	This gene encodes a ubiquitin specific processing protease that was first identified as a substrate of the VHL (von Hippel-Lindau disease) protein E3 ubiquitin ligase complex. In addition to being ubiquitinated by the VHL-E3 ligase complex, this enzyme deubiquitinates hypoxia-inducible factor (HIF)-1 alpha and thereby causes increased expression of HIF-1 alpha targeted genes which play a role in angiogenesis, glucose metabolism, cell proliferation and metastasis. The enzyme encoded by this gene also regulates G-protein coupled receptor signaling by mediating the deubiquitination of beta-2 adrenergic receptor (ADRB2). This enzyme is a ubiquitously expressed thiolester hydrolase. Alternative splicing results in multiple transcript variants encoding the same protein. [provided by RefSeq, Jan 2013]

Product images:



Circular map for RC213090



Western blot validation of overexpression lysate (Cat# [LY423335]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC213090 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).