

## Product datasheet for **RG213090**

### USP20 (NM\_001008563) Human Tagged ORF Clone

#### Product data:

|                           |   |
|---------------------------|---|
| Product Type:             | Expression Plasmids                         |
| Product Name:             | USP20 (NM_001008563) Human Tagged ORF Clone |
| Tag:                      | TurboGFP                                    |
| Symbol:                   | USP20                                       |
| Synonyms:                 | hVDU2; LSFR3A; VDU2                         |
| Mammalian Cell Selection: | Neomycin                                    |
| Vector:                   | pCMV6-AC-GFP (PS100010)                     |
| E. coli Selection:        | Ampicillin (100 ug/mL)                      |



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**ORF Nucleotide Sequence:**

>RG213090 representing NM\_001008563  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGGGGACTCCAGGGACCTTTGCCTCACCTTGACTCCATAGGAGAGGTGACCAAAGAGGACTTGCTGC  
 TCAAATCTAAGGGAACCTGTGAGTCGTGTGGGGTACCGGACCAAACCTATGGGCCTGTCTGCAGTTGC  
 CTGCCCTATGTTGGCTGCGGAGAATCCTTCGCTGACCACAGCACCATTTCATGCACAGGCAAAAAAGCAC  
 AACTTGACCGTGAACCTGACCACGTTCCGACTGTGGTGTACGCCTGTGAGAAGGAGGTATTCTGGAGC  
 AGCGGCTGGCAGCCCTCTGCTGGGCTCCTCTTCAAGTTCTCTGAACAGGACTCCCGCCACCCTCCCA  
 CCCTCTGAAAGCTGTTCCATTGCTGTGGCTGATGAAGGAGAGTCTGAGTCAGAGGATGATGACCTGAAA  
 CCTCGAGGCCACCGGCATGAAGAACCTCGGAACTCCTGCTACATGAACGCCGCCCTGCAGGCCCTGT  
 CCAATTGCCCGCGCTGACTCAGTTCTTCTGGAGTGTGGCGCCCTGGTGCACACAGATAAGAAGCCAGC  
 CCTGTGAAGAGTACCAGAAGCTGGTCTCTGAGGTCTGGCATAAGAAACGGCCAAGCTACGTGGTCCCC  
 ACCAGTCTGTCTCATGGGATCAAGTTGGTCAACCCAATGTTCCGAGGCTATGCCAGCAGGACACCCAAG  
 AGTTCTTCGCTGCCTGATGGACAGCTGCACGAGGAGCTCAAGGAGCCGGTGGTGGCCACGGTGGCGCT  
 GACGGAGGCTCGGGACTCAGATTCGAGTGACACGGATGAGAAACGGGAGGGTGACCGGAGCCATCAGAA  
 GATGAGTCTTGTCTGTGACTCGAGCAGTGACCGGGGTGAGGGTGACGGGCAGGGGCGTGGCGGGGCA  
 GCTCGCAGGCCGAGACGGAGCTGCTGATCCCAGATGAGGCGGGCCGAGCCATCTCTGAGAAGGAGCGGAT  
 GAAGGACCGCAAGTTCTCCTGGGGCCAGCAGCGTACAACTCGGAGCAAGTGACGAGGACGCTGATGTG  
 GACACTGCCATGGCTGCCCTTGACCAGCCCGGAGGCCACGCCCGTACCACGGTCTCCAGCCCCT  
 GCCGACGCCAGAGCCGGACAATGATGCTCACCTACGCAGTCTCTCGCCCTGCAGCCCCGTCACCA  
 CCACGAGGGCCATGCCAAGCTGTCTAGCAGCCCCCTCGTGCAAGCCCGTGAGGATGGCACCCGTGCTAC  
 GTGCTCAAGAAAGCCAGGTATTGAGTGTGGCAGCCGGAGGCGAAGGAGCAGCGCTACCGCAGCGTCA  
 TCTCAGACATCTTTGACGGCTCCATTCTCAGCCTCGTGCAGTGTCTCACCTGTGACCGGGTATCCACCAC  
 AGTGAAACGTTCCAGGACTTACTACTGCCATTCTGAAAGGAGGACCTGGCCAAGCTCCATTAGCC  
 ATCTACCAGAATGTGCCGGCCAAGCCAGGCGCTGTGGGACAGCTATGCCGCCAGGGCTGGCTGGCT  
 TCATTGTGGAGTACATCCGACGGTTTGTGGTATCCTGTACCCCGAGTGGTTTTGGGGCCTGTCGTAC  
 CCTGGAAGACTGCCTTGCTGCCTCTTTGCCGCTGATGAGTTAAAGGGTGACAACATGTACAGCTGTGAG  
 CGGTGTAAGAAGCTGCGAACGGAGTGAAGTACTGCAAAGTCTCGGTTGCCCGAGATCCTGTGCATTC  
 ACCTAAAGCGCTTTCGGCACGAGGTGATGTAATCAAGATCAACAGCCACGTCTCTTCCCCCTCGA  
 GGGGCTCGACCTGCGCCCTTCTTCCAAAGGAGTGCACATCCCAGATCACCCACTACGACCTCCTCTCG  
 GTCATCTGCCACCACGGCAGGCAGGACAGTGGGCACTACATCGCCTACTGCCAGAACGTGATCAATGGGC  
 AGTGGTACGAGTTTGTGACCAAGTACGTACAGAAAGTCCACGAGACGGTGGTGCAGAACGCCGAGGGCTA  
 CGTACTCTTACAGGAAGAGCAGCGAGGAGGCCATGCGGGAGCGACAGCAGGTGGTGTCCCTGGCCGCC  
 ATGCGGGAGCCCAGCCTGCTGCGGTTCTACGTGTCCCGGAGTGGCTCAACAAGTTCAACACCTTCGCGG  
 AGCCAGGCCCATCACCACAGACCTTCTCTGCTCCCACGGAGGCATCCCGCCCAACAATACCACTA  
 CATCGACGACCTGGTGGTATCCTGCCCCAGAACGCTCTGGGAGCACCTGTACAACAGATTGCGGGGTGGC  
 CCCGCCGTGAACCACCTGTACGTGTCTCCATCTGCCAGGTGGAGATCGAGGCACTGGCCAAGCGCAGGA  
 GGATCGAGATCGACACCTTCATCAAGTTGAACAAGGCCTTCCAGGCCGAGGAGTCCCGGGCGTATCTA  
 CTGCATCAGCATGCAGTGGTTCGGGAGTGGGAGGCGTTCGTAAGGGGAAGGACAACGAGCCCCCGGG  
 CCCATTGACAACAGCAGGATTGCACAGGTCAAAGGAAGCGCCATGTCCAGCTGAAGCAGGGAGCTGACT  
 ACGGGCAGATTCGGAGGAGACCTGGACCTACCTGAACAGCCTGTATGGAGGTGGCCCCGAGATTGCCAT  
 CCGCCAGAGTGTGGCGCAGCCGCTGGGCCAGAGAACCTGCACGGGGAGCAGAAGATCGAAGCCGAGACG  
 CGGGCCGTG

**ACGCGTACGCGGCCGCTCGAG** – GFP Tag – **GTTTAA**

**Protein Sequence:** >RG213090 representing NM\_001008563  
 Red=Cloning site Green=Tags(s)

MGDSRDLCPHLDSIGEVTKEDLLLKSKGTCQSCGVTGPNLWACLQVACPYVGCGESFADHSTIHAQAKKH  
 NLTVNLTFFRLWCYACEKEVFLEQRLAAPLLGSSSKFSEQDSPPSHPLKAVPIA VADEGESESEDDDLK  
 PRGLTG MKNLGN SCYMNAALQALSNCPPLTQFFLECGGLVRTDKK PALCKSYQKL VSEVWHKKRPSYVVP  
 TSL SHGIKLVNPMFRGYAQQDTQEFRLCLMDQLHEELKEPVVATVALTEARSDSSDTDEKREGDRSPSE  
 DEFLSCDSSSDRGE GDGQGRGGSSQAETELLIPDEAGRAI SEKERMKDRKF SWGQORTNSEQVDEDADV  
 DTAMAALDQPAEAQPPSPRSSPCRTPEPDNDAHLRSSSRPCSPVHHHEGHAKLSSSPPRASPVRMAPSY  
 VLKKAQVL SAGSRRRKEQRYRSV I SDIFDGSILSLVQCL TCDRVSTTVETFQDL SLPIPKEDLAKLHSA  
 IYQNVPAKPGACGDSYAAQGWLAFIVEYIRRFVVSCTPSWFWGPVVTLEDCLAFFAADELKGDNMYSCE  
 RCKKLNRNGVKYCKVLR LPEILCIHLKRF RHEVMYSFKINSHVSFPLEGLDLRPFLAKECTSQITTYD LLS  
 VICHHTAGSGHYIAYCQNVINGQWYEFDDQYVTEVHETVVQNAEGYVLFYRKSSEEAMRERQVVSLAA  
 MREPSLLRFYVSREWLNKFNTFAEPGPITNQTF L CSHGGIPPHKYHYIDDLV VILPQNVWEHL YNRFGGG  
 PAVNHL YVCSICQVEIEALAKRRRIE IDTFIKLNKAFQAEESPGVIY CISMQWFREWEAFVKGKDNEPPG  
 PIDNSRIAQVKGSGHVQLKQGADY GQISEETWY LNSLYGGGPEIAIRQSV AQPLGPENLHGEQKIEAET  
 RAV

TRTRPLE – GFP Tag – V

**Restriction Sites:** SgfI-MluI

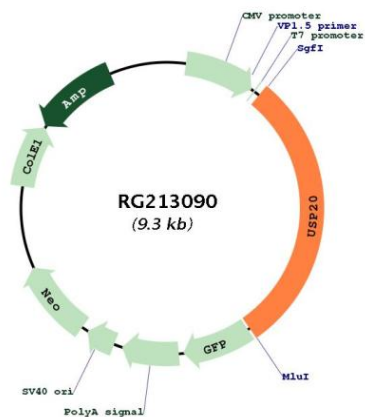
**Cloning Scheme:**



**ACCN:** NM\_001008563

|                               |   |
|-------------------------------|---|
| <b>ORF Size:</b>              | 2739 bp   |
| <b>OTI Disclaimer:</b>        | 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. <a href="#">More info</a>  |
| <b>OTI Annotation:</b>        | This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.  |
| <b>Components:</b>            | 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).  |
| <b>Reconstitution Method:</b> | <ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>   |
| <b>RefSeq:</b>                | <a href="#">NM_001008563.2</a>  |
| <b>RefSeq Size:</b>           | 4368 bp   |
| <b>RefSeq ORF:</b>            | 2745 bp   |
| <b>Locus ID:</b>              | 10868   |
| <b>UniProt ID:</b>            | <a href="#">Q9Y2K6</a>  |
| <b>Cytogenetics:</b>          | 9q34.11   |
| <b>Protein Families:</b>      | Druggable Genome, Protease  |
| <b>Gene Summary:</b>          | 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 RG213090