

## Product datasheet for RC211190

### DUSP7 (NM\_001947) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	DUSP7 (NM_001947) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	DUSP7
Synonyms:	MKPX; PYST2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC211190 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGCCCTGCAAGAGCGCCGAGTGGCTGCAGGAGGAGCTGGAGGCGCGGGCGCGCTCCTTGCTGCTGC  
TCGACTGCCGGCCGACGAGCTCTTCGAGTCGTCGCACATCGAGACGGCCATCAACTGGCCATCCCGGG  
CCTCATGTTGCGCCGCTGCGCAAGGGCAACCTGCCATCCGCTCCATCATCCCCAACACGCCGACAAG  
GAGCGCTTCGCCACGCGCTGCAAGGCGGCCACCGTGTCTACGACGAGGCCACGGCCGAGTGGCAGC  
CCGAGCCCGCGCTCCCGCTCCGTGCTCGGCCTGCTCCTACAGAAGCTGCGCGACGACGGCTGCCAGGC  
CTACTACCTCCAAGGTGTTTCAACAAGTTTCAAACAGAGTACTCTGAGCACTGCCGAGACCAACGTGGAC  
AGCTCTTCTCGCCGAGCAGCTCGCCACCCACCTCAGTGTGGGCTGGGGGGCTGCGCATCAGCTCTG  
ACTGCTCCGACGGCGAGTCGGACCGAGAGCTGCCAGCAGTGCCACCGAGTCAGACGGCAGCCCTGTGCC  
ATCCAGCAACCAGCCTTCCCTGTCCAGATCCTGCCCTACCTCTACCTCGGCTGCGCCAAGGACTCCACC  
AACCTGGACGTGCTCGGCAAGTATGGCATCAAGTATATCCTCAATGTACACCCAACCTACCCAACGCT  
TCGAGCACGGCGGCGAGTTCACCTACAAGCAGATCCCCATCTCTGACCACTGGAGCCAGAACCTCTCCCA  
GTTCTTCCCTGAGGCCATCAGCTTCATTGACGAAGCCCGCTCCAAGAAGTGTGGTGTCTGGTGCAGTGC  
CTGGCAGGCATCAGCCGCTCAGTGACGGTCACTGTGGCCTATCTGATGCAGAAGTGAACCTGTCACTCA  
ACGACGCCTACGACTTTGTCAAGAGGAAAAAGTCCAACATCTCGCCCAACTTCAACTTCATGGGGCAGCT  
GCTGGACTTTGAGCGGACGCTGGGGCTAAGCAGCCGTGCGACAACCACGCTCGAGTGAGCAGCTCTAC  
TTTTCCACGCCCAACCAACAACCTGTTCCCACTCAATACGCTGGAGTCCACG

AC**GGGCCGCT**CGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGA  
TTACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC211190 protein sequence  
 Red=Cloning site Green=Tags(s)

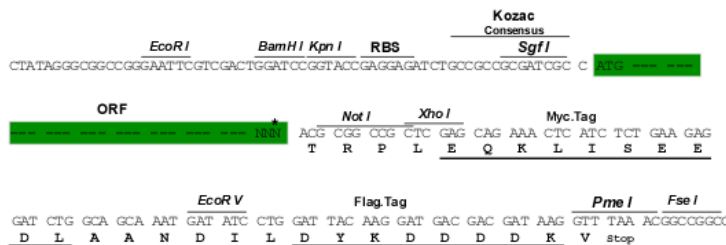
MPCKSAEWLQEELEARGGASLLLLDCRPHELFESSHETAINLAIPGLMLRRLRKGNLPIRSIIPNHADK  
 ERFATRCKAATVLLYDEATAEWQPEPGAPASVLLQLRDDGCQAYYLQGGFNKFQTEYSEHCETNVD  
 SSSSPSSPPTSVLGLGLLRISDCSDGESDRELPSSTATESDGSPVPSSQFAPFPVQILPYLYLGC AKDST  
 NLDVLGKYGIKYLNVTPNLPNAFEHGGEFTYKQIPI SDHWSQNL SQFFPEAISFIDEARSKKCGVLVHC  
 LAGISRSVTVTVAYLMQKMNL SLNDAYDFV KRKKSNI SPNFNFMGQLLDFERTLGLSSPCDNHASSEQLY  
 FSTPTNHNLFPLNTLEST

TRPLEQKLI SEEDLAANDILDYKDDDDKV

**Restriction Sites:** SgfI-NotI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_001947

**ORF Size:** 1104 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.

**RefSeq:** [NM\\_001947.2](#), [NP\\_001938.1](#)

**RefSeq Size:** 3248 bp

**RefSeq ORF:** 1260 bp

**Locus ID:** 1849

**UniProt ID:** [Q16829](#)

**Cytogenetics:** 3p21.2

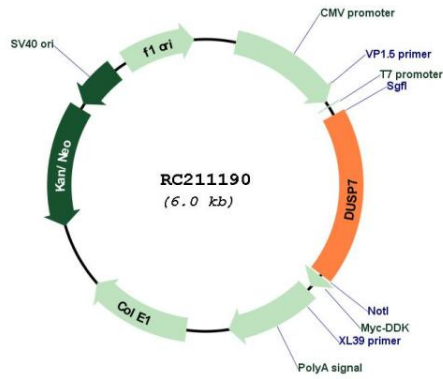
**Protein Families:** Druggable Genome, Phosphatase

**Protein Pathways:** MAPK signaling pathway

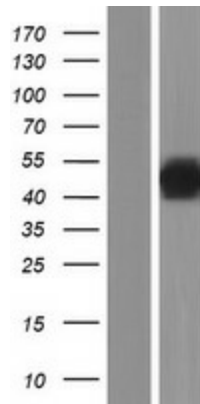
**MW:** 40.6 kDa

**Gene Summary:** Dual-specificity phosphatases (DUSPs) constitute a large heterogeneous subgroup of the type I cysteine-based protein-tyrosine phosphatase superfamily. DUSPs are characterized by their ability to dephosphorylate both tyrosine and serine/threonine residues. DUSP7 belongs to a class of DUSPs, designated MKPs, that dephosphorylate MAPK (mitogen-activated protein kinase) proteins ERK (see MIM 601795), JNK (see MIM 601158), and p38 (see MIM 600289) with specificity distinct from that of individual MKP proteins. MKPs contain a highly conserved C-terminal catalytic domain and an N-terminal Cdc25 (see MIM 116947)-like (CH2) domain. MAPK activation cascades mediate various physiologic processes, including cellular proliferation, apoptosis, differentiation, and stress responses (summary by Patterson et al., 2009 [PubMed 19228121]).[supplied by OMIM, Dec 2009]

Product images:



Circular map for RC211190



Western blot validation of overexpression lysate (Cat# [LY419630]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC211190 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).