

Product datasheet for **RC207797**

Hyaluronan synthase 1 (HAS1) (NM_001523) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Hyaluronan synthase 1 (HAS1) (NM_001523) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Hyaluronan synthase 1
Synonyms:	HAS
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC207797 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGAGACAGGACGCGCCCAAGCCCACTCCTGCAGCCCGCCGCTGCTCCGGCCTGGCCCGAGGGTGTCTGA
 CCATCGCCTTCGCCCTGCTCATCCTGGGCCTCATGACCTGGGCCTACGCCGCCGGGGTGGCCTGGCCTC
 CGATCGCTACGGCCTCCTGGCCTTCGGCCTCTACGGGGCCTTCTTTTCAGCGCACCTGGTGGCGCAGAGC
 CTCTTCGCGTACCTGGAGCACGGCGGGTGGCGCGCGCGCGGGGGCCGCTGGATGCAGCCACCGCGC
 GCAGTGTGGCGTGACCATCTCCGCTACCAGGAGGACCCCGCTACCTGCGCCAGTGCCTGGCCTCCGC
 CCGCGCCTGCTGTACCCGCGCGCGGGCTGCGCGTCTCATGGTGGTGGATGGCAACCGCGCCGAGGAC
 CTCTACATGGTCGACATGTTCCGCGAGGTCTTCGCTGACGAGGACCCCGCCACGTACGTGTGGGACGGCA
 ACTACCACCAGCCCTGGGAACCCGCGCGGGCGGGTGGGCGCCGGAGCCTATCGGGAGGTGGAGGC
 GGAGGATCCTGGCGGGTGGCAGTGGAGGCGCTGGTGGAGACTCGTAGGTGCGTGTGCGTGGCGCAGCGC
 TGGGGCGCAAGCGCGAGGTATGTACACAGCCTCAAGGCGCTCGGAGATTCGATGGACTACGTGCAGG
 TCTGTGACTCGGACACAAGGTTGGACCCATGGCACTGCTGGAGCTCGTGCGGGTACTGGACGAGGACCC
 CCGGTAGGGGCTGTTGGTGGGGACGTGCGGATCCTTAACCTCTGGACTCCTGGGTGAGCTTCTTAAGC
 AGCCTGCGATACTGGGTAGCCTCAATGTGGAGCGGGCTGTGAGAGCTACTTCCACTGTGTATCCTGCA
 TCAGCGGTCTTAGGCCTATATAGGAATAACCTTTCAGCAGTTTTCTTGAGGCCTGGTACAACAGAA
 GTTCTGGGTACCACTGTACTTTGGGATGACCGGCACCTACCAACCGCATGCTCAGCATGGTTAT
 GCTACCAAGTACACCTCCAGTCCCCTGCTACTCAGAGACGCCCTCGTCCTTCTGCGGTGGCTGAGCC
 AGCAGACACGCTGGTCCAAGTCTACTCCGTGAGTGGCTGACAACCGCCTCTGGTGGCACCAGCCACCA
 TGCGTGGATGACCTACGAGGCGGTGGTCTCCGGCCTGTTCCCTTCTTCGTGGCGGCCACTGTGCTGCGT
 CTGTTCTACGCGGGCCGCCCTTGGCGCTGCTGTGGTGTGCTGTGCGTGCAGGGCGTGGCACTGGCCA
 AGGCGGCCTTCGCGCCTGGCTGCGGGGCTGCCTGCGCATGGTGTCTGTGCTCTACGCGCCCTCTA
 CATGTGTGGCCTCCTGCCTGCCAAGTCTGCGCTAGTACCATGAACCAGAGTGGTGGGGCACCTCG
 GGCCGGCGGAAGCTGGCCGTAACCTACGCTCCTGCTGCCCCTGGCGCTCTGGGCGCTGCTGCTGCTT
 GGGGCTGGTCCGACGCTAGCACACGAGGCCAGGGCCGACTGGAGCGGCCCTTCCGCGCAGCCGAGGC
 CTACCCTTGGCCGCGGGGGCCGGCCTACGTGGGCTACTGGTGGCCATGTTGACGCTGTACTGGGTG
 GCGTGGCGAGGCTTTGCCGGCGCGGACCGGGGCTACCGCGTCCAGGTG

ACGCGTACGCGGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC207797 protein sequence
 Red=Cloning site Green=Tags(s)

MRQDAPKPTPAARRCSGLARRVLTIAFALLILGLMTWAYAAGVPLASDRYGLLAFGLYGAFLSAHLVAQS
 LFAYLEHRRVAAAARGPLDAATARSVALTISAYQEDPAYLRQCLASARALLYPRARLRVLMVVDGNRAED
 LYMVMDFREVFADDPATYVWDGNYHQWPEAAAGAVGAGAYREVAEDPGRLAVEALVRTRRCVCAQR
 WGGKREVMYTAFKALGDSMDYVQVCDSDTRLDPALLELVRLDEDPVAVGGDVIRILNPLDSWVSFLS
 SLRYWVAFNVERACQSYFHCVSCISGPLGLYRNNLLQQFLEAWYNQKFLGTHCTFGDDRHLNRMMLSMGY
 ATKYTSRRCYSETPSSFLRWLSQQTRWSKSYFREWLYNALWWHRHHAWMTYEAVVSGLFPFFVAATVLR
 LFYAGRPWALLWVLLCVQGVALLAKAAFAAWLRGCLRMVLLSLYAPLYMCGLLPAKFLALVTMNQSGWGS
 GRRKLAANYVPLPLALWALLLLGGLVRSVAHEARADWSGPSRAAEAYHLAAGAGAYVGYWVAMLTYWY
 GVRRLCRRRTGGYRVQV

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6279_g04.zip

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:


ACCN: NM_001523

ORF Size: 1734 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 Size: 2140 bp

RefSeq ORF: 1737 bp

Locus ID: 3036

UniProt ID: [Q92839](#)

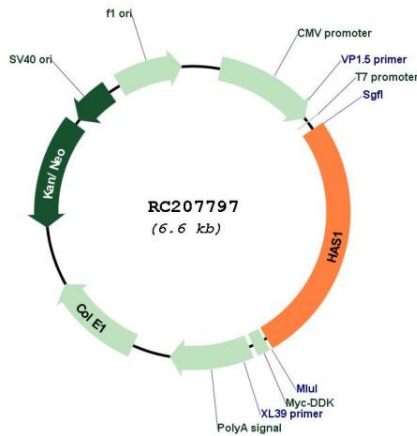
Cytogenetics: 19q13.41

Protein Families: Druggable Genome, Transmembrane

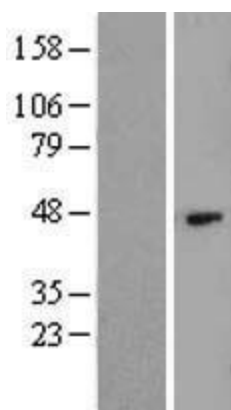
MW: 64.8 kDa

Gene Summary: Hyaluronan or hyaluronic acid (HA) is a high molecular weight unbranched polysaccharide synthesized by a wide variety of organisms from bacteria to mammals, and is a constituent of the extracellular matrix. It consists of alternating glucuronic acid and N-acetylglucosamine residues that are linked by beta-1-3 and beta-1-4 glycosidic bonds. HA is synthesized by membrane-bound synthase at the inner surface of the plasma membrane, and the chains are extruded through pore-like structures into the extracellular space. It serves a variety of functions, including space filling, lubrication of joints, and provision of a matrix through which cells can migrate. HA is actively produced during wound healing and tissue repair to provide a framework for ingrowth of blood vessels and fibroblasts. Changes in the serum concentration of HA are associated with inflammatory and degenerative arthropathies such as rheumatoid arthritis. In addition, the interaction of HA with the leukocyte receptor CD44 is important in tissue-specific homing by leukocytes, and overexpression of HA receptors has been correlated with tumor metastasis. HAS1 is a member of the newly identified vertebrate gene family encoding putative hyaluronan synthases, and its amino acid sequence shows significant homology to the hasA gene product of *Streptococcus pyogenes*, a glycosaminoglycan synthetase (DG42) from *Xenopus laevis*, and a recently described murine hyaluronan synthase. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Jul 2014]

Product images:



Circular map for RC207797



Western blot validation of overexpression lysate (Cat# [LY419883]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC207797 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).