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Product datasheet for RG207797

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:	TurboGFP
Symbol:	Hyaluronan synthase 1
Synonyms:	HAS
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)

ORF Nucleotide Sequence:

>RG207797 representing NM_001523
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGAGACAGGACGCGCCCAAGCCCACTCCTGCAGCCCGCCGCTGCTCCGGCCTGGCCCGGAGGGTGCTGA
CCATCGCCTTCGCCCTGCTCATCCTGGGCCTCATGACCTGGGCCTACGCCGCCGGGGTGCCGCTGGCCTC
CGATCGCTACGGCCTCCTGGCCTTCGGCCTCTACGGGGCCTTCCTTTCAGCGCACCTGGTGGCGCAGAGC
CTCTTCGCGTACCTGGAGCACCGGCGGGTGGCGGCGGCGGCGCGGGGGCCGCTGGATGCAGCCACCGCGC
GCAGTGTGGCGCTGACCATCTCCGCCTACCAGGAGGACCCCGCGTACCTGCGCCAGTGCCTGGCGTCCGC
CCGCGCCCTGCTGTACCCGCGCGCGCGGCTGCGCGTCCTCATGGTGGTGGATGGCAACCGCGCCGAGGAC
CTCTACATGGTCGACATGTTCCGCGAGGTCTTCGCTGACGAGGACCCCGCCACGTACGTGTGGGACGGCA
ACTACCACCAGCCCTGGGAACCCGCGGCGGCGGGCGCGGTGGGCGCCGGAGCCTATCGGGAGGTGGAGGC
GGAGGATCCTGGGCGGCTGGCAGTGGAGGCGCTGGTGAGGACTCGTAGGTGCGTGTGCGTGGCGCAGCGC
TGGGGCGGCAAGCGCGAGGTCATGTACACAGCCTTCAAGGCGCTCGGAGATTCGATGGACTACGTGCAGG
TCTGTGACTCGGACACAAGGTTGGACCCCATGGCACTGCTGGAGCTCGTGCGGGTACTGGACGAGGACCC
CCGGGTAGGGGCTGTTGGTGGGGACGTGCGGATCCTTAACCCTCTGGACTCCTGGGTCAGCTTCCTAAGC
AGCCTGCGATACTGGGTAGCCTTCAATGTGGAGCGGGCTTGTCAGAGCTACTTCCACTGTGTATCCTGCA
TCAGCGGTCCTCTAGGCCTATATAGGAATAACCTCTTGCAGCAGTTTCTTGAGGCCTGGTACAACCAGAA
GTTCCTGGGTACCCACTGTACTTTTGGGGATGACCGGCACCTCACCAACCGCATGCTCAGCATGGGTTAT
GCTACCAAGTACACCTCCAGGTCCCGCTGCTACTCAGAGACGCCCTCGTCCTTCCTGCGGTGGCTGAGCC
AGCAGACACGCTGGTCCAAGTCGTACTTCCGTGAGTGGCTGTACAACGCGCTCTGGTGGCACCGGCACCA
TGCGTGGATGACCTACGAGGCGGTGGTCTCCGGCCTGTTCCCCTTCTTCGTGGCGGCCACTGTGCTGCGT
CTGTTCTACGCGGGCCGCCCTTGGGCGCTGCTGTGGGTGCTGCTGTGCGTGCAGGGCGTGGCACTGGCCA
AGGCGGCCTTCGCGGCCTGGCTGCGGGGCTGCCTGCGCATGGTGCTTCTGTCGCTCTACGCGCCCCTCTA
CATGTGTGGCCTCCTGCCTGCCAAGTTCCTGGCGCTAGTCACCATGAACCAGAGTGGCTGGGGCACCTCG
GGCCGGCGGAAGCTGGCCGCTAACTACGTCCCTCTGCTGCCCCTGGCGCTCTGGGCGCTGCTGCTGCTTG
GGGGCCTGGTCCGCAGCGTAGCACACGAGGCCAGGGCCGACTGGAGCGGCCCTTCCCGCGCAGCCGAGGC
CTACCACTTGGCCGCGGGGGCCGGCGCCTACGTGGGCTACTGGGTGGCCATGTTGACGCTGTACTGGGTG
GGCGTGCGGAGGCTTTGCCGGCGGCGGACCGGGGGCTACCGCGTCCAGGTG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

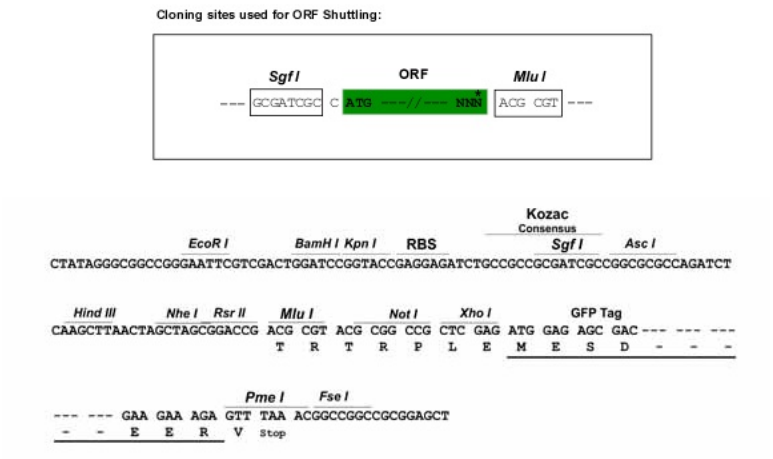
>RG207797 representing NM_001523
Red=Cloning site Green=Tags(s)

MRQDAPKPTPAARRCSGLARRVLTIAFALLILGLMTWAYAAGVPLASDRYGLLAFGLYGAFLSAHLVAQS
LFAYLEHRRVAAAARGPLDAATARSVALTISAYQEDPAYLRQCLASARALLYPRARLRVLMVVDGNRAED
LYMVDMFREVFADEDPATYVWDGNYHQPWEPAAAGAVGAGAYREVEAEDPGRLAVEALVRTRRCVCVAQR
WGGKREVMYTAFKALGDSMDYVQVCDSDTRLDPMALLELVRVLDEDPRVGAVGGDVRILNPLDSWVSFLS
SLRYWVAFNVERACQSYFHCVSCISGPLGLYRNNLLQQFLEAWYNQKFLGTHCTFGDDRHLTNRMLSMGY
ATKYTSRSRCYSETPSSFLRWLSQQTRWSKSYFREWLYNALWWHRHHAWMTYEAVVSGLFPFFVAATVLR
LFYAGRPWALLWVLLCVQGVALAKAAFAAWLRGCLRMVLLSLYAPLYMCGLLPAKFLALVTMNQSGWGTS
GRRKLAANYVPLLPLALWALLLLGGLVRSVAHEARADWSGPSRAAEAYHLAAGAGAYVGYWVAMLTLYWV
GVRRLCRRRTGGYRVQV

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:

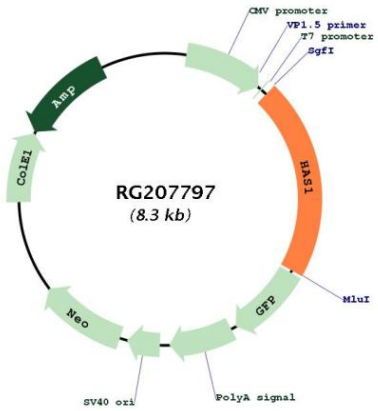


ACCN:	NM_001523
ORF Size:	1731 bp
OTI Disclaimer:	The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own 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_001523.1, NP_001514.1
RefSeq Size:	2088 bp
RefSeq ORF:	1737 bp
Locus ID:	3036
UniProt ID:	Q92839
Cytogenetics:	19q13.41

Protein Families: Druggable Genome, Transmembrane

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 RG207797