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# Product datasheet for RC224227

## Hyaluronan synthase 2 (HAS2) (NM_005328) Human Tagged ORF Clone

### Product data:

| | |
|---|---|
| **Product Type:** | Expression Plasmids |
| **Product Name:** | Hyaluronan synthase 2 (HAS2) (NM_005328) Human Tagged ORF Clone |
| **Tag:** | Myc-DDK |
| **Symbol:** | Hyaluronan synthase 2 |
| **Mammalian Cell Selection:** | Neomycin |
| **Vector:** | pCMV6-Entry (PS100001) |
| **E. coli Selection:** | Kanamycin (25 ug/mL) |



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**ORF Nucleotide Sequence:**

>RC224227 representing NM_005328
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGCATTGTGAGAGGTTTCTATGTATCCTGAGAATAATTGGAACCACACTCTTTGGAGTCTCTCTCCTCC
TTGGAATCACAGCTGCTTATATTGTTGGCTACCAGTTTATCCAAACGGATAATTACTATTTCTCTTTTGG
ACTGTATGGTGCCTTTTTGGCATCACACCTCATCATCCAAAGCCTGTTTGCCTTTTTGGAGCACCGAAAA
ATGAAAAAATCCCTAGAAACCCCCATAAAGTTGAACAAAACAGTTGCCCTTTGCATCGCTGCCTATCAAG
AAGATCCAGACTACTTAAGGAAATGTTTGCAATCTGTGAAAAGGCTAACCTACCCTGGGATTAAAGTTGT
CATGGTCATAGATGGGAACTCAGAAGATGACCTTTACATGATGGACATCTTCAGTGAAGTCATGGGCAGA
GACAAATCAGCCACTTATATCTGGAAGAACAACTTCCACGAAAAGGGTCCCGGTGAGACAGATGAGTCAC
ATAAAGAAAGCTCGCAACACGTAACGCAATTGGTCTTGTCCAACAAAAGTATCTGCATCATGCAAAAATG
GGGTGGAAAAAGAGAAGTCATGTACACAGCCTTCAGAGCACTGGGACGAAGTGTGGATTATGTACAGGTT
TGTGATTCAGACACTATGCTTGACCCAGCCTCATCTGTGGAGATGGTAAAAGTTTTAGAAGAAGATCCCA
TGGTTGGAGGTGTTGGGGGAGATGTCCAGATTTTAAACAAGTACGATTCCTGGATCTCATTCCTCAGCAG
TGTAAGATATTGGATGGCTTTTAATATAGAAAGGGCCTGTCAGTCTTATTTTGGGTGTGTTCAGTGCATT
AGTGGACCTCTGGGAATGTACAGAAACTCCTTGTTGCATGAGTTTGTGGAAGATTGGTACAATCAAGAAT
TTATGGGCAACCAATGTAGCTTTGGTGATGACAGGCATCTCACGAACCGGGTGCTGAGCCTGGGCTATGC
AACAAAATACACAGCTCGATCTAAGTGCCTTACTGAAACACCTATAGAGTATCTCAGATGGCTAAACCAG
CAGACCCGTTGGAGCAAGTCCTACTTCCGAGAATGGCTGTACAATGCAATGTGGTTTCACAAACATCACT
TGTGGATGACCTACGAAGCGATTATCACTGGATTCTTTCCTTTCTTTCTCATTGCCACAGTAATCCAGCT
CTTCTACCGGGGTAAAATTTGGAACATTCTCCTCTTCTTGTTAACTGTCCAGCTAGTAGGTCTCATAAAA
TCATCTTTTGCCAGCTGCCTTAGAGGAAATATCGTCATGGTCTTCATGTCTCTCTACTCAGTGTTATACA
TGTCGAGTTTACTTCCCGCCAAGATGTTTGCAATTGCAACAATAAACAAAGCTGGGTGGGGCACATCAGG
AAGGAAAACCATTGTTGTTAATTTCATAGGACTCATTCCAGTATCAGTTTGGTTTACAATCCTCCTGGGT
GGTGTGATTTTCACCATTTATAAGGAGTCTAAAAGGCCATTTTCAGAATCCAAACAGACAGTTCTAATTG
TTGGAACGTTGCTCTATGCATGCTATTGGGTCATGCTTTTGACGCTGTATGTAGTTCTCATCAATAAGTG
TGGCAGGCGGAAGAAGGGACAACAATATGACATGGTGCTTGATGTA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC224227 representing NM_005328
Red=Cloning site Green=Tags(s)

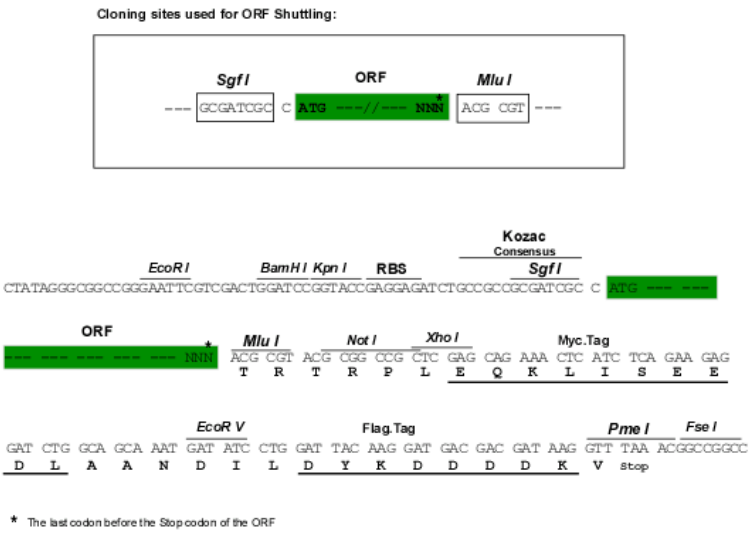
MHCERFLCILRIIGTTLFGVSLLLGITAAYIVGYQFIQTDNYYFSFGLYGAFLASHLIIQSLFAFLEHRK
MKKSLETPIKLNKTVALCIAAYQEDPDYLRKCLQSVKRLTYPGIKVVMVIDGNSEDDLYMMDIFSEVMGR
DKSATYIWKNNFHEKGPGETDESHKESSQHVTQLVLSNKSICIMQKWGGKREVMYTAFRALGRSVDYVQV
CDSDTMLDPASSVEMVKVLEEDPMVGGVGGDVQILNKYDSWISFLSSVRYWMAFNIERACQSYFGCVQCI
SGPLGMYRNSLLHEFVEDWYNQEFMGNQCSFGDDRHLTNRVLSLGYATKYTARSKCLTETPIEYLRWLNQ
QTRWSKSYFREWLYNAMWFHKHHLWMTYEAIITGFFPFFLIATVIQLFYRGKIWNILLFLLTVQLVGLIK
SSFASCLRGNIVMVFMSLYSVLYMSSLLPAKMFAIATINKAGWGTSGRKTIVVNFIGLIPVSVWFTILLG
GVIFTIYKESKRPFSESKQTVLIVGTLLYACYWVMLLTLYVVLINKCGRRKKGQQYDMVLDV

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** https://cdn.origene.com/chromatograms/mk6235_c07.zip

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**




**ACCN:** NM_005328

**ORF Size:** 1656 bp

**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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

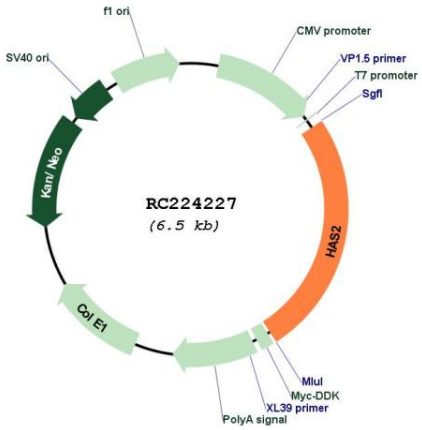
**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

**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_005328.1, NP_005319.1 |
| **RefSeq Size:** | 3003 bp |
| **RefSeq ORF:** | 1659 bp |
| **Locus ID:** | 3037 |
| **UniProt ID:** | Q92819 |
| **Cytogenetics:** | 8q24.13 |
| **Domains:** | Glycos_transf_2 |
| **Protein Families:** | Druggable Genome, Transmembrane |
| **MW:** | 63.4 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. HAS2 is a member of the newly identified vertebrate gene family encoding putative hyaluronan synthases, and its amino acid sequence shows significant homology to glycosaminoglycan synthetase (DG42) from Xenopus laevis, and human and murine hyaluronan synthase 1. [provided by RefSeq, Jul 2008] |

## Product images:




Circular map for RC224227