

# Product Information

## **MemDX™ Membrane Protein Human HAS1 (Hyaluronan synthase 1) Expressed *in vitro* *E.coli* expression system, Full Length**

Cat. No.: **MPX3638K**

This product is for research use only and is not intended for diagnostic use.

This product is a Human HAS1 membrane protein expressed *in vitro E.coli* expression system. The protein is for research use only and is not approved for use in humans or in clinical diagnosis.

### Product Specifications

#### Host Species

Human

#### Target Protein

HAS1

#### Protein Length

Full Length

#### Protein Class

Transferase

#### TMD

7

#### Sequence

MRQQDAPKPTPAACRCSGLARRVLTIAFALLILGLMTWAYAAGVPLASDRYGLLAFGLYGAFLSAHLVAQSLFAYLEHRRVAAAARQ

### Product Description

#### Expression Systems

*in vitro E.coli* expression system

#### Tag

10xHis tag at the N-terminus

#### Protein Format

Soluble

#### Form

Liquid or Lyophilized powder

#### Buffer

Tris/PBS-based buffer, 6% Trehalose, pH 8.0

### Storage

Aliquot and store at -20°C or lower. For long term storage, we recommend to store at -70°C or lower. Avoid freeze/thaw cycles.

### Target

#### Target Protein

HAS1

#### Full Name

Hyaluronan synthase 1

#### Introduction

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.

#### Alternative Names

HAS1; HAS; HA synthase 1; hyaluronate synthase 1; hyaluronic acid synthase 1; Hyaluronan synthase 1

#### Gene ID

[3036](#)

#### UniProt ID

[Q92839](#)