

Fibrillin-1/Asprosin Protein, Human (HEK293, N-His)

Cat. No.:	HY-P700298
Synonyms:	rHuAsprosin, His; Fibrillin-1; FBN1; Asprosin; FBN
Species:	Human
Source:	HEK293
Accession:	P35555 (S2732-H2871)
Gene ID:	2200
Molecular Weight:	26-33 kDa

PROPERTIES

AA Sequence	S T N E T D A S N I E D Q S E T E A N V S L A S W D V E K T A I F A F N I S H V S N K V R I L E L L P A L T T L T N H N R Y L I E S G N E D G F F K I N Q K E G I S Y L H F T K K K P V A G T Y S L Q I S S T P L Y K K K E L N Q L E D K Y D K D Y L S G E L G D N L K M K I Q V L L H
Biological Activity	Measured by its binding ability in a functional ELISA. Immobilized Human MFAP4 at 0.5 µg/mL (100 µL/well) can bind Biotinylated Human Fibrillin-1. The ED ₅₀ for this effect is 0.8473 µg/mL, corresponding to a specific activity is 1.18×10 ³ Unit/mg.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of 20 mM PB, 150 mM NaCl, pH 7.4.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	Fibrillin-1, known as asprosin, serves as a vital structural component of the 10-12 nm diameter microfibrils within the extracellular matrix, conferring both structural support and regulatory functions to load-bearing connective tissues. These microfibrils contribute to long-term force-bearing structural support in various tissues, such as the lung, blood vessels, and skin, where they form the periphery of elastic fibers. Fibrillin-1-containing microfibrils act as scaffolds for elastin deposition,
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and in specific tissues like the ciliary zonule, tendon, cornea, and glomerulus, they form elastin-independent networks, providing tensile strength and anchoring roles. Beyond its structural role, Fibrillin-1 plays a crucial role in tissue homeostasis through specific interactions with growth factors, including bone morphogenetic proteins (BMPs), growth and differentiation factors (GDFs), and latent transforming growth factor-beta-binding proteins (LTBPs), as well as with cell-surface integrins and other extracellular matrix components. It regulates osteoblast maturation, negatively influences osteoclastogenesis by sequestering TNFSF11, and mediates cell adhesion through interactions with integrins. As an adipokine secreted by white adipose tissue, asprosin regulates glucose metabolism in the liver, muscle, and pancreas, exerting effects on plasma glucose levels in response to fasting. Additionally, asprosin functions as an orexigenic hormone, crossing the blood-brain barrier to stimulate appetite by activating orexigenic AgRP neurons and inhibiting anorexigenic POMC neurons in the hypothalamus. It may also play a role in sperm motility in the testis via interaction with the OR4M1 receptor.

Caution: Product has not been fully validated for medical applications. For research use only.

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