HTRA1 Protein, Human (His)

Cat. No.:	HY-P701005
Synonyms:	L56; Serine protease 11; HTRA; PRSS11; 5654; ARMD7; IGFBP5-protease; L56; ORF480;
Species:	Human
Source:	E. coli
Accession:	Q92743 (Q23-P480)
Gene ID:	5654
Molecular Weight:	38-40 kDa

PROPERTIES

Biological Activity	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
Appearance	Solution.
Formulation	Supplied as a 0.22μm filtered solution of 50 mM Tris, 500 mM NaCl, pH 8.5.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	N/A.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background	HTRA1, a serine protease, demonstrates a diverse range of targets, notably including extracellular matrix proteins like fibronectin. The generation of fibronectin fragments by HTRA1 further stimulates synovial cells to up-regulate MMP1 and MMP3 production, suggesting a role in extracellular matrix remodeling. Additionally, HTRA1 exhibits the capacity to degrade proteoglycans such as aggrecan, decorin, and fibromodulin, potentially releasing soluble FGF-glycosaminoglycan complexes that enhance FGF signaling in the extracellular space. This multifaceted enzyme regulates the availability of insulin-like growth factors (IGFs) by cleaving IGF-binding proteins and inhibits signaling mediated by TGF-beta family members, influencing various physiological processes, including retinal angiogenesis and neuronal survival and maturation during development. Moreover, intracellularly, HTRA1 degrades TSC2, leading to the activation of downstream targets. The formation of homotrimers and potential higher-order multimers in the presence of substrate highlights the complex regulatory mechanisms of HTRA1, which also interacts with TGF-beta family members like BMP4, TGFB1, TGFB2, activin A, and GDF5.

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

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