

Recombinant Human Serpin Peptidase Inhibitor, Clade H (heat shock protein 47), Member 1, (collagen binding protein 1), His-tagged

Cat. No. SERPINH1-4718H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human HSP47 produced in E.Coli is a single, non-glycosylated polypeptide chain containing 439 amino acids (18-418 aa) and having a molecular mass of 48.9 kDa. HSP47 human recombinant is fused to 37 amino acid His Tag at N-terminus and purified by conventional chromatography techniques.
Species	Human
Source	E.coli
ProteinLength	18-418 a.a.
Description	SERPINH1 is part of the serpin superfamily of serine proteinase inhibitors. SERPINH1 expression is induced by heat shock. HSP47 localizes to the endoplasmic reticulum lumen and binds collagen therefore it is a molecular chaperone which takes part in the maturation of collagen molecules, facilitating the folding and assembly of procollagen molecules, retaining unfolded molecules within the ER, and assisting the transport of correctly folded-molecules from the ER to Golgi apparatus. Autoantibodies to HSP47 protein have been found in rheumatoid arthritis. SERPINH1 binds specifically to collagen and acts as a chaperone in the biosynthetic pathway of collagen.
Form	The SERPINH1 protein solution (1mg/ml) contains 20mM Tris-HCl, pH-8 & 10%

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	Glycerol.
Purity	Greater than 90.0% as determined by SDS-PAGE.
Physical Appearance	Sterile filtered colorless solution.
Amino acid sequence	MRGSHHHHHH GMASMTGGQQ MGRDLYDDDD KDRWGSMAA EVKKPAAAAA PGTAEKLSPK AATLAERSAG LAFSLYQAMA KDQAVENILV SPVVVASSLG LVSLGGKATT ASQAKAVLSA EQLRDEEVHA GLGELLRSLS NSTARNVTWK LGSRLYGPSS VSFADDFVRS SKQHYNCEHS KINFRDKRSA LQSINEWAAQ TTDGKLPEVT KDVERTDGAL LVNAMFFKPH WDEKFHHKMV DNRGFMVTRS YTVGVMMHR TGLYNYYDDE KEKLQIVEMP LAHKLSSLII LMPHHVEPLE RLEKLLTKEQ LKIWMGKMQK KAVAISLPKG VVEVTHDLQK HLAGLGLTEA IDKNKADLSR MSGKKDLYLA SVFHATAFEL DTDGNPFDQD IYGREELRSP KLFYADHPFI FLVRDTQSGS LLFIGRLVRP KGDKMRDEL.
Storage	Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

GENE INFORMATION

Gene Name	SERPINH1 serpin peptidase inhibitor, clade H (heat shock protein 47), member 1, (collagen binding protein 1) [Homo sapiens]
Official Symbol	SERPINH1
Synonyms	SERPINH1; CBP1; CBP2; OI10; gp46; AsTP3; HSP47; PIG14; PPROM; RA-A47; SERPINH2; serpin H1; colligin-1; colligin-2; OTTHUMP00000229451; OTTHUMP00000229452; OTTHUMP00000229453; OTTHUMP00000229454; OTTHUMP00000229458; 47 kDa heat shock protein; arsenic-transactivated protein

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3; rheumatoid arthritis antigen A-47; cell proliferation-inducing gene 14 protein; rheumatoid arthritis-related antigen RA-A47; serine (or cysteine) proteinase inhibitor, clade H (heat shock protein 47), member 1, (collagen binding protein 1); serine (or cysteine) proteinase inhibitor, clade H (heat shock protein 47), member 2, (collagen-binding protein 2)

Gene ID	871
mRNA Refseq	NM_001207014
Protein Refseq	NP_001193943
MIM	600943
UniProt ID	P50454
Chromosome Location	11q13.5
Function	collagen binding; serine-type endopeptidase inhibitor activity