

## Active Recombinant Human Integrin, Beta 1 (fibronectin receptor, beta polypeptide, antigen CD29 includes MDF2, MSK12)

**Cat. No.** ITGB1-1484H    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                      |
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| <b>Product Overview</b> | TIMP1 Human Recombinant produced in HEK-293 cells is a single, glycosylated, polypeptide chain containing 184 amino acids with a molecular weight of 20.7 kDa though on SDS-PAGE migrates at about 28kDa due to the glycosilation. The TIMP1 is purified by proprietary chromatographic techniques.                                                                                                  |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Source</b>           | Human                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Description</b>      | TIMP1 is a member of the TIMP family. TIMP1 is an inducible glycoprotein produced by various cell types. The TIMP1 glycoprotein is a natural inhibitor of the matrix metalloproteinases, which a group of peptidases involved in degradation of the extracellular matrix. TIMP1 binds in a reversible mode to MMPs, with regions in the N-terminal domain binding to the MMP substrate-binding site. |
| <b>Form</b>             | The TIMP1 protein was lyophilized from a 0.2µm filtered solution containing no additives or preservatives.                                                                                                                                                                                                                                                                                           |
| <b>Purity</b>           | Greater than 95.0% as determined by SDS-PAGE                                                                                                                                                                                                                                                                                                                                                         |
| <b>Bio-activity</b>     | IC50 = 0.4 to 1.2 nM, determined by the concentration dependent inhibition of human MMP-2 hydrolysis of a peptide substrate (7-methoxycoumarin-4-yl)acetyl-Pro-Leu-Gly-Leu-(3-[2, 4-dinitrophenyl]-L-2, 3-diaminopropionyl)-Ala-Arg-NH <sub>2</sub> , under conditions i                                                                                                                             |

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|                            | n which recombinant pro-MMP-2 is activated, and the peptide substrate concentration is 5 $\mu$ M.                                                                                                                                                                                                                                     |
| <b>Physical Appearance</b> | Sterile Filtered White lyophilized (freeze-dried) powder.                                                                                                                                                                                                                                                                             |
| <b>Solubility</b>          | It is recommended to reconstitute the lyophilized TIMP1 in sterile 18M $\Omega$ -cm H <sub>2</sub> O not less than 100g/ml, which can then be further diluted to other aqueous solutions.                                                                                                                                             |
| <b>Amino acid sequence</b> | CTCVPPHPQT AFCNSDLVIR AKFVGTPPEVN QTTLYQRYEI<br>KMTKMYKGFQALGDAADIRF VYTPAMESVC GYFHRSHNRS EEFLIAGKLQ<br>DGLLHITTCS FVAPWNSLSL AQRGFTKTY TVGCEECTVF PCLSIPCKLQ<br>SGTHCLWTDQ LLGSEKGFQ SRHLACLPRE PGLCTWQSLR SQIA                                                                                                                     |
| <b>Storage</b>             | Lyophilized TIMP1 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution TIMP1 should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles. |

## GENE INFORMATION

|                        |                                                                                                                                                                                                                                                                                                                        |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>       | ITGB1 integrin, beta 1 (fibronectin receptor, beta polypeptide, antigen CD29 includes MDF2, MSK12) [ Homo sapiens ]                                                                                                                                                                                                    |
| <b>Official Symbol</b> | ITGB1                                                                                                                                                                                                                                                                                                                  |
| <b>Synonyms</b>        | ITGB1; integrin, beta 1 (fibronectin receptor, beta polypeptide, antigen CD29 includes MDF2, MSK12); FNRB; CD29; GPIIA; Fibronectin receptor subunit beta; MDF2; MSK12; VLA-BETA; VLAB; integrin beta-1; integrin VLA-4 beta subunit; very late activation protein, beta polypeptide; CD29 antigen; VLA-4 subunit beta |
| <b>Gene ID</b>         | 3688                                                                                                                                                                                                                                                                                                                   |

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| <b>mRNA Refseq</b>         | <a href="#">NM_002211</a>                                                                                                                                                                                        |
| <b>Protein Refseq</b>      | <a href="#">NP_002202</a>                                                                                                                                                                                        |
| <b>MIM</b>                 | <a href="#">135630</a>                                                                                                                                                                                           |
| <b>UniProt ID</b>          | <a href="#">P05556</a>                                                                                                                                                                                           |
| <b>Chromosome Location</b> | 10p11.2                                                                                                                                                                                                          |
| <b>Pathway</b>             | Adaptive Immunity Signaling; Arf6 trafficking events; Arrhythmogenic right ventricular cardiomyopathy (ARVC); Axon guidance; CXCR4-mediated signaling events; Cell junction organization; Dilated cardiomyopathy |
| <b>Function</b>            | actin binding; alpha-actinin binding; identical protein binding; protein binding; protein domain specific binding; receptor activity                                                                             |

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