

## Active Recombinant Dog TIMP1 protein, His-tagged

Cat. No. TIMP1-2786D Lot. No. (See product label)

### SPECIFICATION

<b>Product Overview</b>	Active Recombinant Dog TIMP1 protein(P81546)(32~207 aa), fused with N-terminal His tag, was expressed in E.coli.
<b>Species</b>	Dog
<b>Source</b>	E.coli
<b>ProteinLength</b>	32-207 aa
<b>Form</b>	Lyophilized from sterile PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
<b>Bio-activity</b>	Tissue inhibitors of metalloproteinase 1 (TIMP1) is a member of the family of proteins that regulate the activation and proteolytic activity of the zinc enzymes known as matrix metalloproteinases (MMPs). TIMP-1 is a glycoprotein with a molecular mass of 28 kDa produced by a wide range of cell types. TIMP-1 inhibits active MMP-mediated proteolysis by forming an N-terminal, non-covalent binary complex with the MMP active site. The activity of recombinant dog TIMP1 was measured by its ability to inhibit rhMMP2 cleavage of a fluorogenic peptide substrate MCA-Pro-Leu-Gly-Leu-DPA-Ala-Arg-NH <sub>2</sub> in the assay buffer 50 mM Tris, 10 mM CaCl <sub>2</sub> , 150 mM NaCl, 0.05% (w/v) Brij-35, pH 7.5. rhMMP2 was diluted to 100 ug/ml and activated with 1 mM APMA at 37°C for 1 hour and TIMP1 (MW: 20.86 KD) was diluted to different concentrations with the assay buffer. Mix 8 μof TIMP1 curve dilutions, 12.8 μof activated rhMMP-2, and 59.2 μof assay buffer, including a control containing assay buffer and the diluted rhMMP-2 and

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incubate the reactions for 2 hours at 37°C. Loading 50 µof the incubated mixtures which were diluted five-fold in assay buffer into empty wells of a plate, and start the reaction by adding 50 µof 20 M substrate. Include a substrate blank containing 50 µof assay buffer and 50 µof 20 M substrate. Then read at excitation and emission wavelengths of 320 nm and 405 nm, respectively, in kinetic mode for 5 minutes. The result was shown and it was obvious that recombinant dog TIMP1 significantly decreased rhMMP2 activity. The inhibition IC50 was <30 nM.

<b>Molecular Mass</b>	20.9kDa
<b>Endotoxin</b>	<1.0EU per 1µg (determined by the LAL method).
<b>Purity</b>	> 95% as determined by SDS-PAGE.
<b>Storage</b>	Avoid repeated freeze/thaw cycles. Store at -20°C for 12 months. Aliquot and store at -80°C for 12 months.
<b>Reconstitution</b>	Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

## GENE INFORMATION

<b>Gene Name</b>	TIMP1 TIMP metalloproteinase inhibitor 1 [ <i>Canis lupus familiaris</i> ]
<b>Official Symbol</b>	TIMP1
<b>Synonyms</b>	TIMP1; TIMP metalloproteinase inhibitor 1; metalloproteinase inhibitor 1; tissue inhibitor of metalloproteinase 1; tissue inhibitor of metalloproteinases 1; tissue inhibitor of matrix metalloproteinase-1; TIMP-1;
<b>Gene ID</b>	403816

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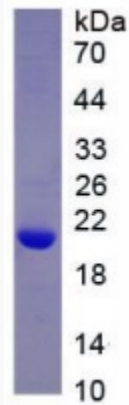
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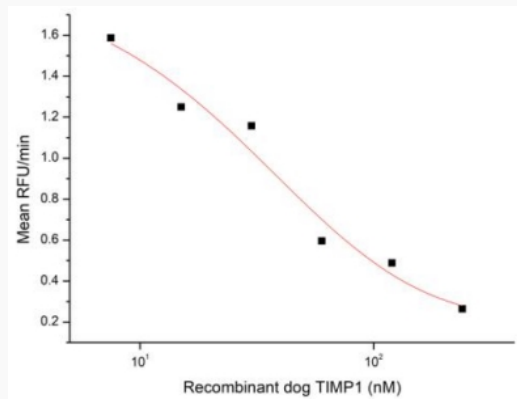
mRNA Refseq [NM\\_001003182](#)

Protein Refseq [NP\\_001003182](#)

SDS-PAGE



Activity



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