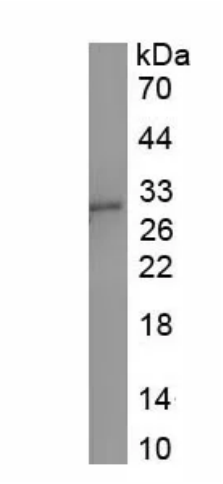
Active Tissue Factor Pathway Inhibitor 2 (TFPI2)

Catalog#:PEH12772

概述（Summary）

别称（Alternative Names）	PP5; Placental protein 5
纯度（Purity）	Greater than 95% as determined by reducing SDS-PAGE.
内毒素（Endotoxin level）	Please contact with the lab for this information
蛋白构建（Construction）	【Asp23-Phe235】
Accession #	P48307
表达宿主（Host）	E.coli
种属（Species）	Homo sapiens (Human)
预测分子量（Predicted MW）	25.9 kDa
制剂（Form）	Lyophilized from a 0.2 μm filtered solution of PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
运输方式（Shipping）	The product is shipped with ice bag. Upon receipt, store it immediately at the temperature listed below.
稳定性&储存（Stability &Storage）	12 months at -20°C to -80°C in lyophilized state.6 months at -20°C to -80°C under sterile conditions after reconstitution.7-10 days at 2°C to 8°C under sterile conditions after reconstitution.Please minimize freeze-thaw cycles.
复溶（Reconstitution）	Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.
背景介绍（References）	May play a role in the regulation of plasmin-mediated matrix remodeling. Inhibits trypsin, plasmin, factor VIIa/tissue factor and weakly factor Xa. Has no effect on thrombin.

电泳图（SDS-PAGE image）



Greater than 95% as determined by reducing SDS-PAGE.

活性图（Bioactivity image）

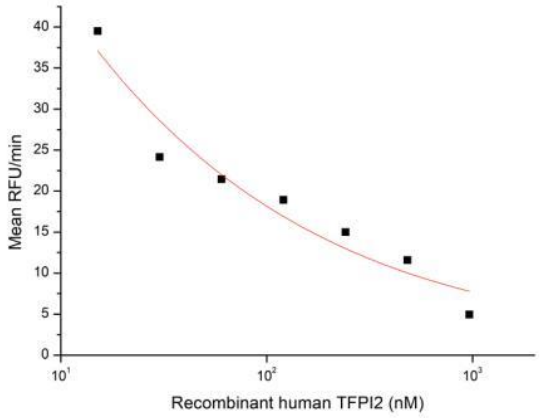
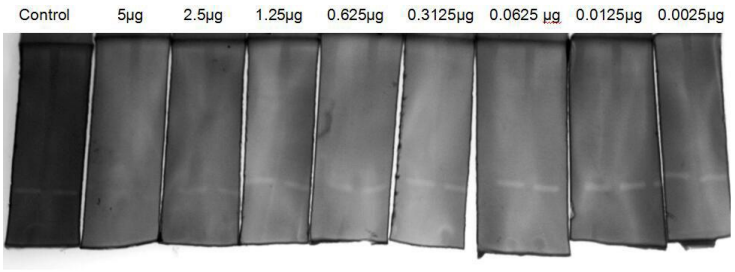


Figure 2. Inhibition of trypsin activity by recombinant human TFPI2

Tissue Factor Pathway Inhibitor 2 (TFPI2) takes part in the regulation of plasmin-mediated matrix remodeling. Inhibits trypsin, plasmin, factor VIIa/tissue factor and weakly factor Xa. TFPI2 does not have any influence on thrombin. TFPI2 also can inhibit MMP activity, which can hydrolyze gelatin under certain conditions. Thus, the activity of TFPI2 can be measured by inhibit MMP-2 hydrolyze gelatin. Gelatin zymography is mainly used for the detection of the gelatinases, 2μg/mL was denatured by SDS loading buffer, electrophoresed through sodium dodecylsulphate–polyacrylamide gel (SDS–PAGE; 8%gels) containing gelatin (1mg/mL) with nonreducing conditions. After renaturation, incubate with various concentrations of recombinant human TFPI2, then staining with coomassie brilliant blue G250, active MMP-2 would hydrolyze gelatin nearby, which was indicated by the white binds on the gel; if the activity of MMP-2 inhibit by TFPI2, there was none white binds on the gel. The result was shown in figure 1. As the figure1 shown, MMP-2 can be inhibited by recombinant human TFPI2 at least 5μg/mL. The activity of recombinant human TFPI2 was also measured by its ability to inhibit trypsin cleavage of a fluorogenic peptide substrate Mca-RPKPVE-Nval-WRK(Dnp)-NH2 in the assay buffer 50 mM Tris, 10 mM CaCl2, 150 mM NaCl, 0.05% (w/v) Brij-35, pH 7.5. Trypsin was diluted to 50 ug/ml in the assay buffer and 20 ul different concentrations of recombinant human TFPI2 (MW: 25.89 KD) was incubated with 20 ul diluted trypsin at 37 ℃ for 15 minutes. Loading 50 μL of the incubated mixtures which were diluted five-fold in assay buffer into empty wells of a plate, and start the reaction by adding 50 μL of 20 μM substrate. Include a substrate blank containing 50 μL of assay buffer and 50 μL of 20 μM substrate. Then read at excitiation and emission wavelengths of 320 nm and 405 nm, respectively, in kinetic mode for 5 minutes. The result was shown in Figure 2 and it was obvious that recombinant human TFPI2 significantly decreased trypsin activity. The inhibition IC50 was <60 nM.



注意事项（Note）

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