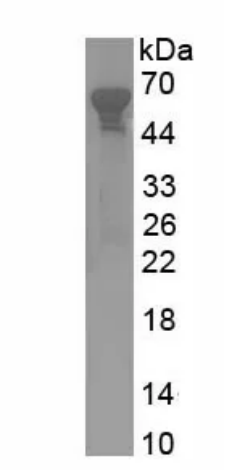
Active Endonuclease G, Mitochondrial (ENDOG)

Catalog#:PER12850

概述（Summary）

别称（Alternative Names）	ENDO-G
纯度（Purity）	Greater than 90% as determined by reducing SDS-PAGE.
内毒素（Endotoxin level）	Please contact with the lab for this information
蛋白构建（Construction）	【Met1-Lys294】
Accession #	Q3V5X8
表达宿主（Host）	E.coli
种属（Species）	Rattus norvegicus (Rat)
预测分子量（Predicted MW）	62.3 kDa
制剂（Form）	Lyophilized from a 0.2 μm filtered solution of 20mM Tris, 150mM NaCl, pH8.0, containing 1mM EDTA, 1mM DTT, 0.01% SKL, 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.

电泳图（SDS-PAGE image）



Greater than 90% as determined by reducing SDS-PAGE.

活性图（Bioactivity image）

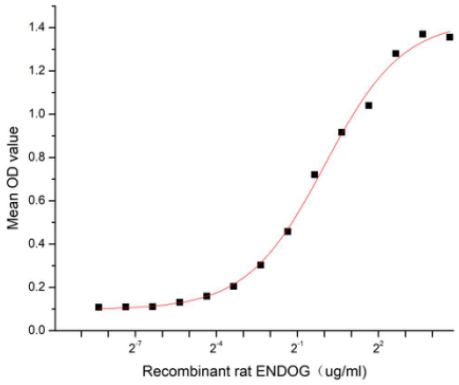


Figure 1. The binding activity of recombinant rat ENDOG and recombinant human CYCS

Endonuclease G, Mitochondrial (ENDOG) is a conserved nuclease encoded by nuclear DNA and localized in the mitochondrial intermembrane space. It plays dual roles in apoptosis and mitochondrial genome maintenance. During programmed cell death, ENDOG is released into the cytosol, cleaving nuclear and mitochondrial DNA at specific sites to facilitate apoptotic degradation. Structurally, it functions as a homodimer with Mg^{2+}-dependent endonuclease activity. Beyond apoptosis, ENDOG participates in mitochondrial DNA replication, repair, and maternal genome processing during embryogenesis. Notably, ENDOG interacts with cytochrome c (CYCS) to synergistically amplify apoptosis. This complex enhances nucleolytic DNA degradation and modulates the mitochondrial permeability transition pore (MPTP), further promoting cell death.Thus a functional ELISA assay was conducted to detect the interaction of recombinant rat ENDOG and recombinant human CYCS. Briefly, ENDOG was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 µl were then transferred to CYCS-coated microtiter wells and incubated for 1h at 37℃. Wells were washed with PBST and incubated for 1h with anti-ENDOG pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody for 1h at 37℃, wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37℃. Finally, add 50 µL stop solution to the wells and read at 450/630nm immediately. The binding activity of recombinant rat ENDOG and recombinant human CYCS was shown in Figure 1, the EC50 for this effect is 1.01ug/mL.

注意事项（Note）

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