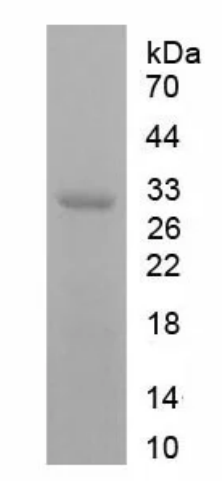
Active Growth Differentiation Factor 15 (GDF15)

Catalog#:PHH12808

概述（Summary）

别称（Alternative Names）	PDF; MIC1; NAG-1; PLAB; PTGFB; Macrophage inhibitory cytokine 1; NSAID-activated gene 1 protein; Placental bone morphogenetic protein; Prostate differentiation factor
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）	【Ala195-Ile308】
Accession #	Q99988
表达宿主（Host）	293F
种属（Species）	Homo sapiens (Human)
预测分子量（Predicted MW）	25.3 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）	Regulates food intake, energy expenditure and body weight in response to metabolic and toxin-induced stresses. Binds to its receptor, GFRAL, and activates GFRAL-expressing neurons localized in the area postrema and nucleus tractus solitarius of the brainstem. It then triggers the activation of neurons localized within the parabrachial nucleus and central amygdala, which constitutes part of the 'emergency circuit' that shapes feeding responses to stressful conditions. On hepatocytes, inhibits growth hormone signaling.

电泳图（SDS-PAGE image）



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

活性图（Bioactivity image）

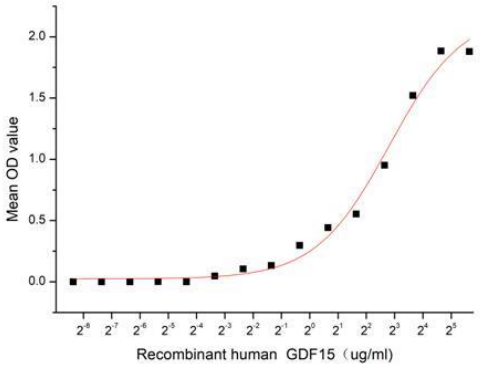


Figure 1. The binding activity of GDF-15 and TGFbR2

Growth Differentiation Factor 15 (GDF-15), also called Macrophage Inhibitory Cytokine 1 (MIC-1), is a divergent member of the Transforming Growth Factor beta (TGF-beta) superfamily. Human GDF-15 shares 66% and 68% amino acid sequence identity with the rat and mouse proteins, respectively. GDF-15 is highly expressed in placenta and brain, and it is expressed at lower levels in kidney, pancreas, prostate, and colon. Similar to other TGF-beta family proteins, GDF-15 is synthesized as a large precursor protein that is cleaved at a dibasic cleavage site (RxxR) to release the mature protein. Biologically active GDF-15 is a disulfide-linked homodimer of the mature protein. GDF 15 has been shown to have various functions, including inhibition of Tumor Necrosis Factor alpha (TNF-alpha) production from lipopolysaccharide-stimulated macrophages and the induction of cartilage formation. A functional ELISA assay was conducted to detect the interaction of recombinant human GDF-15 and recombinant human Transforming Growth Factor Beta Receptor II (TGFbR2). Briefly, biotin-linked GDF-15 were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 ul were then transferred to TGFbR2-coated microtiter wells and incubated for 1h at 37 ℃. Wells were washed with PBST 3 times and incubation with Streptavidin-HRP for 30min, then 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 nm immediately. The binding activity of GDF-15 and TGFbR2 was shown in Figure 1, the EC50 for this effect is 7.002 ug/mL.

注意事项（Note）

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