

CHASELECTION**Recombinant Human TGF- β 1, Tag Free**

货号(Catalog Number): CY083FXXXX(L)

别名(synonym):

TGF-beta 1 protein; TGFbeta 1; TGF-beta 1; TGFbeta;
TGF-beta-1; transforming growth factor beta-1;
transforming growth factor, beta 1.

来源(Source): HEK293**蛋白结构 (Structure):**

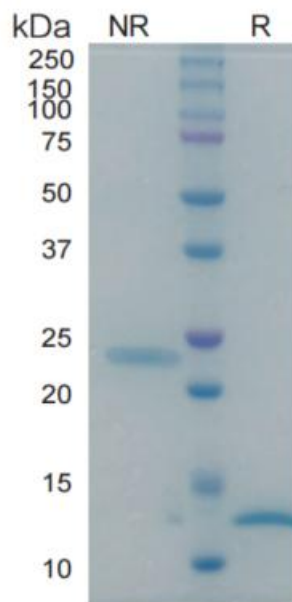
该蛋白不含标签

基因 ID: P01137**氨基酸序列:**

Ala279-Ser390

分子量大小(MW):

12.8 kDa[monomer], 25.6kDa[Dimer]

纯度 (Purity): $\geq 95\%$, determined by SDS-PAGE**SDS-PAGE**

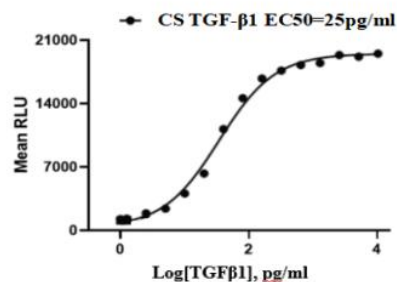
2 ug/lane protein was resolved with SDS-PAGE under non-reducing (NR) and reducing (R) conditions and visualized by Coomassie blue staining.

内毒素含量 (Endotoxin):

<0.01 EU per 1 μg of the protein by the LAL method.

制剂(Formulation):

Solution protein. Dissolved in sterile 20 mM sodium citrate (pH=2.5) buffer. This solution can be diluted into other aqueous buffers. Centrifuge the vial prior to opening.

活性检测 (Biological Activity):**Bioactivity**Measured by (CAGA)₂-luciferase reporter assay.Measured by (CAGA)₁₂-luciferase reporter assay.**储存与运输(Storage):**

Avoid repeated freeze-thaw cycles.

It is recommended that the protein be aliquoted for optimal storage.

36 months from date of receipt, -20 to -70°C as supplied.

Shipping with dry ice.

产品背景介绍 (Production):

TGF- β 1 (transforming growth factor beta 1) is one of three closely related mammalian members of the large TGF- β superfamily that share a



characteristic cystine knot structure . TGF- beta 1, -2 and -3 are highly pleiotropic cytokines that are proposed to act as cellular switches that regulate processes such as immune function, proliferation and epithelial-mesenchymal transition. Each TGF- beta isoform has some non-redundant functions; for TGF- beta 1, mice with targeted deletion show defects in hematopoiesis and endothelial differentiation, and die of overwhelming inflammation . Human TGF- beta 1 cDNA encodes a 390 amino acid (aa) precursor that contains a 29 aa signal peptide and a 361 aa proprotein. A furin-like convertase processes the proprotein to generate an N-terminal 249 aa latency-associated peptide (LAP) and a C-terminal 112 aa mature TGF- beta 1. Disulfide-linked homodimers of LAP and TGF- beta 1 remain non-covalently associated after secretion, forming the small latent TGF- beta 1 complex . Covalent linkage of LAP to one of three latent TGF- beta binding proteins (LTBPs) creates a large latent complex that may interact with the extracellular matrix . TGF- beta is activated from latency by pathways that include actions of the protease plasmin, matrix metalloproteases, thrombospondin 1 and a subset of integrins. Mature human TGF- beta 1 shares 100% aa identity with pig, dog and cow TGF- beta 1, and 99% aa identity with mouse, rat and horse TGF- beta 1. It demonstrates cross-species activity. TGF- beta 1 signaling begins with high-affinity binding to a type II ser/thr kinase receptor termed TGF- beta RII. This receptor then phosphorylates and activates a second ser/thr kinase receptor, TGF- beta RI (also called activin receptor-like kinase (ALK) -5), or alternatively, ALK-1. This complex phosphorylates and activates Smad proteins that regulate transcription. Contributions of the accessory receptors betaglycan (also known as TGF- beta RIII) and endoglin, or use of Smad-independent signaling pathways, allow for disparate actions observed in response to TGF- beta in different contexts .

