

SBE-Luc/HEK293

CBP74058

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I. Background

The transforming growth factor beta (TGF β) signaling pathway is involved in a diverse range of cell processes such as differentiation, cell cycle arrest, and immune regulation. TGF β signaling has been linked to cardiac disease, cancer, Alzheimer's and other human diseases. TGF β proteins bind to receptors on the cell surface, initiating a signaling cascade that leads to phosphorylation and activation of SMAD2 and SMAD3, which then form a complex with SMAD4. The SMAD complex then translocates to the nucleus and binds to the SMAD binding element (SBE) in the nucleus, leading to transcription and expression of TGF β /SMAD responsive genes.

II. Description

The SBE Reporter – HEK293 Cell Line is designed for monitoring the activity of the TGF /SMAD signaling pathway. The transforming growth factor beta (TGF) signaling pathway is involved in a diverse range of cell processes such as differentiation, cell cycle arrest, and immune regulation. TGF signaling has been linked to cardiac disease, cancer, Alzheimer's



and other human diseases. TGF proteins bind to receptors on the cell surface, initiating a signaling cascade that leads to phosphorylation and activation of SMAD2 and SMAD3, which then form a complex with SMAD4. The SMAD complex then translocates to the nucleus and binds to the SMAD binding element (SBE) in the nucleus, leading to transcription and expression of TGF / SMAD responsive genes.

III. Introduction

Host Cell: HEK293

Expressed gene: SBE-Luciferase

Stability: 32 passages (in-house test, that not means the cell line will be instable beyond the passages we tested.)

Synonym(s): SBE reporter, TGF β reporter, TGFbeta reporter, SMAD reporter

Freeze Medium: 90% FBS+10% DMSO

Culture Medium: DMEM+10%FBS+100ug/ml hygromycin

Mycoplasma Testing: Negative

Storage: Liquid nitrogen

Application(s): Functional(Report Gene) Assay



IV. Description of Host Cell Line

Organism: Homo sapiens, human

Tissue: Embryonic kidney

Disease: Normal

Morphology: Epitheloid cell

Growth Properties: Adherent

V. Representative Data

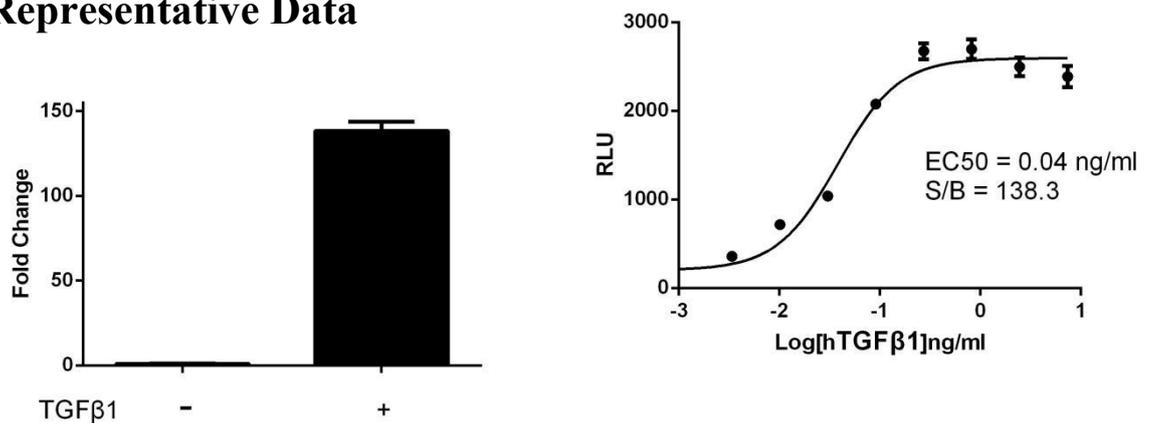


Figure 1. Detect Luciferase assay by Ultra Luciferase Detection Kit CBPH0001 (we strongly suggest to purchase from Cobioer). HEK293/SBE Luciferase Reporter cells were stimulated by hTGFβ1, the S/B was 138.3-fold.

