Human TGFβ (types I/II) Reporter Assay System

The TGFβ assay uses proprietary human cells that provide constitutive expression of the Human type I and type II Transforming Growth Factor beta Receptors (TGFβ I/II), both of which are transmembrane serine/threonine kinase receptors. Receptor activation results when TGFβ binds to RII, which then phosphorylates and forms a heterodimer complex with Ri. The mechanisms of TGFβ-RI/RII activation and ensuing signal transduction cascade have been well studied and involve the phosphorylation and interplay of a variety of Smad regulatory proteins and transcription factors. Additionally, cross-talk between the activate TGFβ and NF-kB signal transduction pathways have been characterized.

INDIGO's Reporter Cells include the luciferase reporter gene functionally linked to tandem TGFβ Response Sequences (TRS) derived from hthe human plasminogen activator inhibitor-1 (PAI-1) promoter, a well-characterized TGFβ responsive target gene. The TRS sequences are readily bound by activated dimeric Smad3/Smad4 to initiate formation of a transcription complex. Quantifying changes in luciferase activity in drug-treated cells versus untreated (or vehicle-treated) reporter cells provides a sensitive surrogate measure of drug-induced changes in TGFβ activity.

The principal application of this assay is in the screening of compounds / drug candidates to quantify any functional activity, either agonist or antagonist, that they may exert against the human TGFβ receptor.

Ordering Information

Order Online »

NGO-IB12001-0032	3x32 assays
NGO-IB12001-0096	96 wells
NGO-IB12002-0384	384 wells

Manuals, SDS & CofA

View Online »

Handling & Storage

Shipping Dry Ice

Regulatory Status RUO - Research Use Only

Product Details

Alternative Name Transforming Growth Factor β

Contents INDIGO's TGFβ assay kit provides the convenience of an all-inclusive cell-based assay system. In addition the the TGFβ Reporter Cells, provided are two optimized media for use in recovering the cryopreserved cells and for diluting test samples. Also included is the reference agonist TGF-β1, Luciferase Detection Reagents, and a cell culture-ready assay plate.

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