TGF-beta/Smad

Transforming growth factor beta

Transforming growth factor-beta (TGF-beta) is a multifunctional cytokine that regulates proliferation, migration, differentiation, and survival of many different cell types. Deletion or mutation of different members of the TGF-β family have been shown to cause vascular remodeling defect and absence of mural cell formation, leading to embryonic lethality or severe vascular disorders. TGF-β induces smooth muscle differentiation via Notch or SMAD2 and SMAD3 signaling in ES cells or in a neural crest stem cell line. TGF-β binds to TGF-βRI and to induce phosphorylation of SMAD2/3, thereby inhibiting proliferation, tube formation, and migration of endothelial cells (ECs).

TGF-β is a pluripotent cytokine with dual tumour-suppressive and tumour-promoting effects. TGF-β induces the epithelial-to-mesenchymal transition (EMT) leading to increased cell plasticity at the onset of cancer cell invasion and metastasis.
(E)-SIS3
Cat. No.: HY-13013

(E)-SIS3 is a potent and selective inhibitor of Smad3 with an IC₅₀ of 3 μM for Smad3 phosphorylation. (E)-SIS3 inhibits the myofibroblast differentiation of fibroblasts by TGF-β1.

Purity: >98.0%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 2 mg, 5 mg, 10 mg, 25 mg

10,11-Dehydrocurvularin
Cat. No.: HY-N6679

10,11-Dehydrocurvularin is an antibiotic and a strong activator of the heat shock response, a conserved evolutionary mechanism that maintains protein homeostasis via the overexpression of heat shock factor 1 (HSF1) and various chaperones including heat shock protein 90...

Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Alantolactone
Cat. No.: HY-N0038

Alantolactone is a selective STAT3 inhibitor, with potent anticancer activity. Alantolactone induces apoptosis in cancer.

Purity: 99.94%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

CCT365623 hydrochloride
Cat. No.: HY-124674A

CCT365623 hydrochloride is an orally active lysyl oxidase (LOX) inhibitor, with an IC₅₀ of 0.89 μM. CCT365623 hydrochloride suppresses EGFR (pY1068) and AKT phosphorylation driven by EGFR. CCT365623 hydrochloride is extremely well tolerated, and has good pharmacokinetic properties.

Purity: >98.0%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Asiaticoside
Cat. No.: HY-N0439

Asiaticoside, a trisaccaride triterpene from Centella asiatica, suppresses TGF-β/Smad signaling through inducing Smad7 and inhibiting TGF-βRI and TGF-βRII in keloid fibroblasts; Asiaticoside shows antioxidant, anti-inflammatory, and anti-ulcer properties.

Purity: 99.84%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 10 mg, 50 mg, 100 mg

Disitertide
(P144)
Cat. No.: HY-P0118

Disitertide (P144) is an inhibitor of TGF-β1.

Purity: 98.12%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg, 10 mg, 25 mg

Halofuginone
(RU-19110)
Cat. No.: HY-N1584

Halofuginone (RU-19110) is a less-toxic form of Febrifugine, which is isolated from the plant Dichroa febrifuga. Halofuginone inhibits prolyl-tRNA synthetase in an ATP-dependent manner with a Kᵢ of 18.3 nM. Halofuginone attenuates osteoarthritis (OA) by inhibition of TGF-β activity.

Purity: 98.32%
Clinical Data: Phase 2
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg
Hydrochlorothiazide (HCTZ)  Cat. No.: HY-80252

Hydrochlorothiazide is a diuretic drug of the thiazide class.

Purity: 99.20%
Clinical Data: Launch
Size: 500 mg, 5 g, 10 g

Kartogenin (KGN)  Cat. No.: HY-16268

Kartogenin is an inducer of differentiation of human mesenchymal stem cells into chondrocytes.

Purity: 98.34%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

Oxymatrine  Cat. No.: HY-N0158

Oxymatrine, an alkaloid from the roots of Sophora species, with anti-inflammatory, antifibrosis, and antitumor effects, inhibits the iNOS expression and TGF-β/Smad pathway.

Purity: >98.0%
Clinical Data: Launch
Size: 10 mM × 1 mL, 100 mg, 200 mg, 500 mg, 1 g

Pirfenidone (AMR69)  Cat. No.: HY-B0673

Pirfenidone (AMR69) is an antifibrotic agent that attenuates and production in fibrocyte cells. Pirfenidone has growth-inhibitory effect and reduces protein levels in human TGF-β2 glioma cell lines. Pirfenidone also has anti-inflammatory activities.

Purity: 99.98%
Clinical Data: Launch
Size: 10 mM × 1 mL, 100 mg, 500 mg, 1 g, 5 g

Pirfenidone D5 (AMR69 D5)  Cat. No.: HY-B0673S

Pirfenidone D5 (AMR69 D5) is a deuterium labeled Pirfenidone. Pirfenidone is an antifibrotic agent that attenuates CCL2 and CCL12 production in fibrocyte cells. Pirfenidone has growth-inhibitory effect and reduces TGF-β2 protein levels in human glioma cell lines.

Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

SIS3 free base  Cat. No.: HY-100444

SIS3 free base is a potent and selective inhibitor of Smad3 phosphorylation. SIS3 free base inhibits the myofibroblast differentiation of fibroblasts by TGF-β1.

Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

SRI-011381 hydrochloride  Cat. No.: HY-100347A

SRI-011381 hydrochloride is an oral bioavailable TGF-beta signaling agonist, exhibits neuroprotective effect.

Purity: 99.78%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

Trimethylamine N-oxide  Cat. No.: HY-116084

Trimethylamine N-oxide is a gut microbe-dependent metabolite of dietary choline and other trimethylamine-containing nutrients. Trimethylamine N-oxide induces inflammation by activating the ROS/NLRP3 inflammasome.

Purity: >98.0%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 100 mg