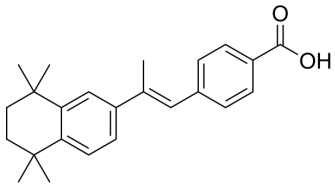
# TTNPB (GMP)

| | |
|---|---|
| **Cat. No.:** | HY-15682G |
| **CAS No.:** | 71441-28-6 |
| **Molecular Formula:** | $C_{24}H_{28}O_2$ |
| **Molecular Weight:** | 348.48 |
| **Target:** | RAR/RXR |
| **Pathway:** | Metabolic Enzyme/Protease; Vitamin D Related/Nuclear Receptor |
| **Storage:** | Please store the product under the recommended conditions in the Certificate of Analysis. |




## BIOLOGICAL ACTIVITY

| | |
|---|---|
| **Description** | TTNPB (Ro 13-7410) (GMP) is TTNPB (HY-15682) produced by using GMP guidelines. GMP small molecules work appropriately as an auxiliary reagent for cell therapy manufacture. TTNPB is a highly potent retinoic acid receptor (RAR) agonist[1][2]. |
| **In Vitro** | The combination of TTNPB (Ro 13-7410) (GMP) (100 nM) and Laduviglusib (HY-10182) can induce chondrogenic markers in hiPSCs[2].<br>MCE has not independently confirmed the accuracy of these methods. They are for reference only. |
| **In Vivo** | The combination of TTNPB (Ro 13-7410) (GMP) (100 nM) and Laduviglusib (HY-10182) can form hyaline cartilaginous tissues in vivo[2].<br>MCE has not independently confirmed the accuracy of these methods. They are for reference only. |

## PROTOCOL

**Kinase Assay** [1]

Labeled and unlabeled retinoids are added to nucleosol or cytosolic fractions in ethanol so that the total amount of ethanol added is constant in all tubes and did not exceed 2% of the incubation volume. The receptor preparations are incubated with retinoids at 47°C for 4-6 hr. Sephadex PD-10 desalting columns are used to separate bound radioligand from free radioligand after equilibrium is achieved. For competitive binding assays, varying concentrations of unlabeled competing ligand are incubated with the appropriate nucleosol or cytosol in the presence of a fixed concentration of [$^3$H]tRA (sp act. 49.3 Ci/mmol) or [$^3$H]9-cis RA (sp. act. 24.0 Ci/mmol). Final concentrations of [$^3$H] tRA and [$^3$H]9-cis RA for nuclear receptor binding assays are 5nM. Final concentrations of [$^3$H]tRA for CRABP binding assays is 30 nM. The $IC_{50}$s are calculated. For saturation kinetics, increasing concentrations of radiolabeled ligand ([$^3$H]tRA sp. act. 49.3 Ci/mmol, [$^3$H]TTNPB sp. act. 5.5 Ci/mmol) are added to the nucleosol of the appropriate receptor subtype in the presence (nonspecific binding) or absence (total binding) of a 100-fold molar excess of the corresponding unlabeled retinoid. Specific binding is defined as the total binding minus nonspecific binding. Saturation kinetics are calculated[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

## CUSTOMER VALIDATION

- Biomaterials. 2018 Dec 6;193:30-46.
- Biomedicines. 2020 Nov 9;8(11):485.
- Patent. US20180263995A1.

See more customer validations on www.MedChemExpress.com

## REFERENCES

[1]. Pignatello MA, et al. Multiple factors contribute to the toxicity of the aromatic retinoid, TTNPB (Ro 13-7410): binding affinities and disposition. Toxicol Appl Pharmacol. 1997 Feb;142(2):319-27.

[2]. Manabu Kawata, et al. Simple and Robust Differentiation of Human Pluripotent Stem Cells toward Chondrocytes by Two Small-Molecule Compounds. Stem Cell Reports. 2019 Sep 10;13(3):530-544.



Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA