# Telomerase

Telomerase is a DNA polymerase that extends the 3' ends of chromosomes by processively synthesizing multiple telomeric repeats. It is a unique ribonucleoprotein (RNP) containing a specialized telomerase reverse transcriptase (TERT) and telomerase RNA (TER) with its own template and other elements required with TERT for activity (catalytic core), as well as species-specific TER-binding proteins important for biogenesis and assembly (core RNP); other proteins bind telomerase transiently or constitutively to allow association of telomerase and other proteins with telomere ends for regulation of DNA synthesis.

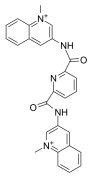
Telomerase activity is responsible for the maintenance of chromosome end structures (telomeres) and cancer cell immortality in most human malignancies, making telomerase an attractive therapeutic target. Indeed, a telomerase inhibitor is expected to provide a therapeutic benefit in most cancers while having little side-effects. The adult stem cells that express telomerase in normal tissues divide slowly and have long telomeres, therefore they should be less impacted by telomerase inhibition than the cancer cells which divide rapidly and usually possess short telomeres.

# Telomerase Inhibitors & Activators

## 360A

Cat. No.: HY-15595

360A is a selective stabilizer of **G-quadruplex**, and also inhibits **telomerase** activity with an $IC_{50}$ of 300 nM for telomerase in TRAP-G4 assay.



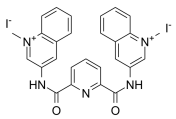
**Purity:** >98%
**Clinical Data:** No Development Reported
**Size:** 1 mg, 5 mg

## 360A iodide

**(360 A iodide)**

Cat. No.: HY-15595A

360A iodide is a selective stabilizer of **G-quadruplex**, and also inhibits **telomerase** activity with an $IC_{50}$ of 300 nM for telomerase in TRAP-G4 assay.

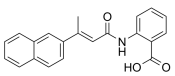


**Purity:** ≥98.0%
**Clinical Data:** No Development Reported
**Size:** 5 mg, 10 mg, 50 mg, 100 mg

## BIBR 1532

Cat. No.: HY-17353

BIBR 1532 is a potent, selective and non-competitive **telomerase** inhibitor with $IC_{50}$ of 100 nM in a cell-free assay.

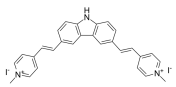


**Purity:** 99.94%
**Clinical Data:** No Development Reported
**Size:** 10 mM × 1 mL, 10 mg, 50 mg, 100 mg

## BMVC

Cat. No.: HY-135775

BMVC is a potent **G-quadruplex (G4)** stabilizer and a selective **telomerase** inhibitor with an $IC_{50}$ of ~0.2 μM. BMVC inhibits Taq DNA polymerase with an $IC_{50}$ of ~2.5 μM. BMVC increases the melting temperature of **G4** structure of telomere and accelerates telomere length shortening.



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

## Ceramides Mixture

Cat. No.: HY-113679

Ceramides Mixture is an endogenous ceramide and consists of hydroxy and non-hydroxy fatty acid-containing ceramides. Ceramides Mixture is a main lipid component of the permeability barrier in epidermis.

Ceramides Mixture

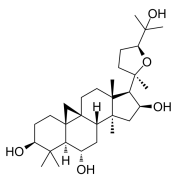
**Purity:** ≥98.0%
**Clinical Data:** No Development Reported
**Size:** 25 mg, 50 mg, 100 mg

## Cycloastragenol

**(Astramembrangenin; Cyclosieversigenin)**

Cat. No.: HY-N1485

Cycloastragenol (Astramembrangenin), the active form of astragaloside IV, has anti-oxidant, anti-inflammatory, anti-aging, anti-apoptotic, and cardiovascular protective effects. Cycloastragenol is a potent **telomerase** activator and can lengthen telomeres.



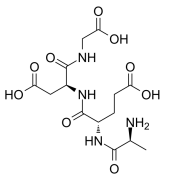
**Purity:** ≥98.0%
**Clinical Data:** No Development Reported
**Size:** 5 mg, 10 mg, 20 mg

## Epitalon

**(Epithalon; Epithalamin)**

Cat. No.: HY-P1149

Epitalon is an anti-aging agent and a telomerase activator. Epitalon has an inhibitory effect of the on the development of spontaneous tumors in mice, has geroprotective actions and intranasal administration increases neuronal activity.



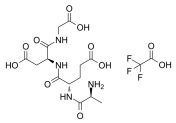
**Purity:** >98%
**Clinical Data:** No Development Reported
**Size:** 1 mg, 5 mg, 10 mg, 25 mg

## Epitalon TFA

**(Epithalon TFA; Epithalamin TFA)**

Cat. No.: HY-P1149A

Epitalon TFA is an anti-aging agent and a telomerase activator. Epitalon TFA has an inhibitory effect of the on the development of spontaneous tumors in mice, has geroprotective actions and intranasal administration increases neuronal activity.



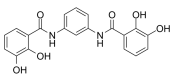
**Purity:** 99.23%
**Clinical Data:** No Development Reported
**Size:** 10 mM × 1 mL, 1 mg, 5 mg, 10 mg, 25 mg

## MST-312

**(Telomerase Inhibitor IX)**

Cat. No.: HY-120145

MST-312 is a **telomerase** inhibitor. MST-312 is a chemically modified derivative of green tea epigallocatechin gallate (EGCG). MST-312 can be used for the research of cancer, such as multiple myeloma (MM).

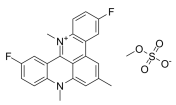


**Purity:** 98.62%
**Clinical Data:** No Development Reported
**Size:** 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

## RHPS4

Cat. No.: HY-101089

RHPS4 is a potent **telomerase** inhibitor ($IC_{50}$ = 0.33 μM). RHPS4 is a DNA damage inducer.

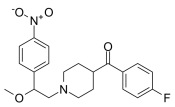


**Purity:** 98.62%
**Clinical Data:** No Development Reported
**Size:** 5 mg, 10 mg, 25 mg, 50 mg

## Telomerase-IN-1

Cat. No.: HY-U00268

Telomerase-IN-1 is a **Telomerase** inhibitor with an $IC_{50}$ of 0.19 μM.

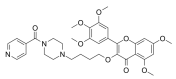


**Purity:** >98%
**Clinical Data:** No Development Reported
**Size:** 1 mg, 5 mg

## Telomerase-IN-2

Cat. No.: HY-126482

Telomerase-IN-2 is a **telomerase** inhibitor, and inhibits telomerase activity by decreasing expression of dyskerin, with an $IC_{50}$ of 0.89μM. Anti-cancer activity.

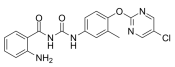


**Purity:** 98.71%
**Clinical Data:** No Development Reported
**Size:** 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

## Telomerase-IN-3

Cat. No.: HY-126483

Telomerase-IN-3 is a **telomerase** inhibitor, which directly targets **hTERT** promoter activity. hTERT is the key component for maintenance of telomerase activity.



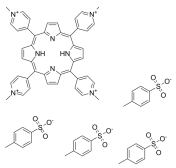
**Purity:** 99.63%
**Clinical Data:** No Development Reported
**Size:** 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

## TMPyP4 tosylate

**(TMP 1363)**

Cat. No.: HY-108477

TMPyP4 tosylate (TMP 1363) is a **quadruplex**-specific ligand, which inhibits the interaction between G-quadruplexes and IGF-1. TMPyP4 tosylate (TMP 1363) is a **telomerase** inhibitor with antitumor effects in osteosarcoma cell lines.



**Purity:** ≥98.0%
**Clinical Data:** No Development Reported
**Size:** 100 mg