G-quadruplex

G-Quadruplex nucleic acids or G-quadruplexes (G4s) are four-stranded DNA or RNA secondary structures that are formed in guanine-rich sequences. They are widely distributed in functional regions of the human genome, such as telomeres, ribosomal DNA (rDNA), transcription start sites, promoter regions and untranslated regions of mRNA, suggesting that G-quadruplex structures may play a pivotal role in the control of a variety of cellular processes. In addition, G4s are enriched and conserved in the regulatory regions of microbes, including bacteria, fungi, and viruses.

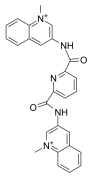
The irregular formation of G4s on some genes might cause neurodegenerative diseases and cancers. Therefore, G4s in the genome are the therapeutic targets of these diseases. Small molecules, from naturally occurring to synthetic, are exploited to specifically target G-quadruplexes and have proven to be a new class of anticancer agents.

G-quadruplex 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.



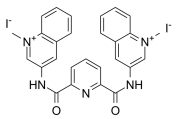
Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

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.

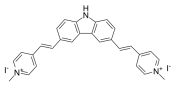


Purity: ≥98.0%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 50 mg, 100 mg

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.



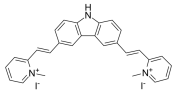
Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

BMVC2

(o-BMVC)

Cat. No.: HY-135776

BMVC2 (o-BMVC) is a bisubstitute carbazole derivative of BMVC. BMVC2 is a **G-quadruplex (G4)** stabilizer.

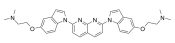


Purity: ≥95.0%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

L5-DA

Cat. No.: HY-144712

L5-DA is a **G-quadruplex (G4)** ligand and selectively stabilized for G4s over ds26. L5-DA exhibits significant cytotoxicity against HeLa cells (IC_{50}=4.3 μM). L5-DA stabilizes G4s in HeLa cells, induces **apoptosis**, and cell cycle arrest.

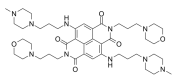


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

MM41

Cat. No.: HY-16967

MM41 is a potent stabilizer of human telomeric and gene promoter DNA quadruplexes. MM41 is potently against the MIA PaCa-2 pancreatic cancer cell line with IC_{50} value of <10 nM.



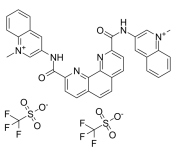
Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Phen-DC3 Trifluoromethanesulfonate

(Phen-DC3 Triflate)

Cat. No.: HY-15594A

Phen-DC3 Trifluoromethanesulfonate is a **G-quadruplex** (G4) specific ligand which can inhibit **FANCJ** and **DinG** helicases with IC_{50}s of 65±6 and 50±10 nM, respectively.



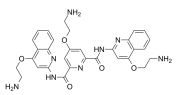
Purity: 99.53%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg, 10 mg, 50 mg

Pyridostatin

(RR82)

Cat. No.: HY-15176

Pyridostatin (RR82) is a **G-quadruplex DNA** stabilizing agent (K_d=490 nM). Pyridostatin promotes growth arrest in human cancer cells by inducing replication- and transcription-dependent DNA damage. Pyridostatin targets the proto-oncogene Src.



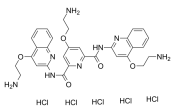
Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Pyridostatin hydrochloride

(RR82 hydrochloride)

Cat. No.: HY-15176A

Pyridostatin (RR82) hydrochloride is a **G-quadruplex DNA** stabilizing agent (K_d=490 nM). Pyridostatin hydrochloride promotes growth arrest in human cancer cells by inducing replication- and transcription-dependent DNA damage.



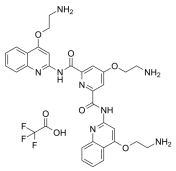
Purity: 98.77%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

Pyridostatin TFA

(RR82 TFA)

Cat. No.: HY-15176B

Pyridostatin (RR82) TFA is a **G-quadruplex DNA** stabilizing agent (K_d=490 nM). Pyridostatin TFA promotes growth arrest in human cancer cells by inducing replication- and transcription-dependent DNA damage. Pyridostatin TFA targets the proto-oncogene Src.



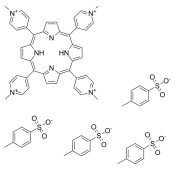
Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

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