Product Datasheet

BAY 1895344

Catalog No. **BP-01941** · CAS **1876467-74-1** · Form **free base** · Physical state **solid** · Color **light yellow to yellow** · Version **1.0** · Revision **2026-09-03**

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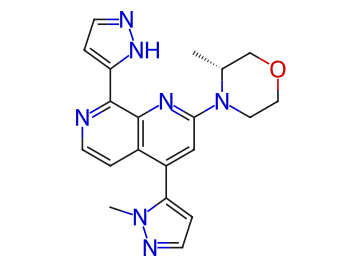
Target	Research area
ATM/ATR	**Cancer**

Molecular formula	$C_{20}H_{21}N_7O$
Molecular weight	**375.4270**

STRUCTURE



DESCRIPTION

Elimusertib (BAY-1895344) is a potent, orally active and selective ATR inhibitor with an IC50 of 7 nM. Elimusertib has anti-tumor activity[1][2]. Elimusertib can be used for the research of solid tumors and lymphomas[3].

BIOLOGICAL ACTIVITY

In Vitro

Elimusertib potently inhibits the proliferation of a broad spectrum of human tumor cell lines with a median IC50 of 78 nM.

Elimusertib potently suppresses hydroxyurea-induced H2AX phosphorylation (IC50: 36 nM).

Elimusertib shows good selectivity against mTOR (ratio of IC50 values: mTOR/ATR 61).

Elimusertib reveals high selectivity against other related kinases, such as DNA-PK (IC50: 332 nM), ATM (IC50: 1420 nM), and PI3K (IC50: 3270 nM).

Elimusertib has potent antiproliferative activity against various cancer cell lines in vitro, 25 for example in the CRC cell lines HT-29 (IC50: 160 nM) and LoVo (IC50: 71 nM), and in the B-cell lymphoma cell line SU-DHL-8 (IC50: 9 nM).

In Vivo

Elimusertib shows potent anti-tumor efficacy in monotherapy in a variety of xenograft models of ovarian and colorectal cancer, and causes complete tumor remission in mantle cell lymphoma models.

Elimusertib (50 mg/kg; p.o.; b.i.d.; 3 days on/4 days off; for 11 days) exhibits strong antitumor efficacy in the ATM-mutated SU-DHL-8 (ATM K1964E) human GCB-DLBCL cell line derived xenograft model in mice.

Elimusertib (20 mg/kg, and 10 mg/kg from day 14; p.o.; daily; 2 days on/5 days off; for 42 days) in combination with Carboplatin (40 mg/kg; i.p.; daily; 1 day on/6 days off) results in synergistic antitumor activity in the platinum-resistant ATM protein low expressing CR5038 human CRC PDX model in NOD/SCID mice.

Elimusertib exhibits moderate oral bioavailability (rat 87%, dog 51%) following oral administration (rat and dog 0.6-1 mg/kg).

Elimusertib exhibits terminal elimination half-lives (mouse 0.17 h, rat 1.3 and, dog 1.0 h) due to plasma clearance (3.5, 1.2, and 0.79 L/h/kg respectively) following intravenous administration (mouse, rat and dog 0.3-0.5 mg/kg).

SOLUBILITY

Soluble in DMSO

REFERENCES

[1]. Ulrich T. Luecking, et al. Abstract 983: Identification of potent, highly selective and orally available ATR inhibitor BAY 1895344 with favorable PK properties and promising efficacy in monotherapy and combination in preclinical tumor models. Cancer Research. July 2017 Volume 77, Issue 13 Supplement.

[2]. Antje Margret Wengner, et al. Abstract 836: ATR inhibitor BAY 1895344 shows potent anti-tumor efficacy in monotherapy and strong combination potential with the targeted alpha therapy Radium-223 dichloride in preclinical tumor models. Cancer Research. July 2017 Volume 77, Issue 13 Supplement.

[3]. Ulrich Lücking, et al. Damage Incorporated: Discovery of the Potent, Highly Selective, Orally Available ATR Inhibitor BAY 1895344 with Favorable Pharmacokinetic Properties and Promising Efficacy in Monotherapy and in Combination Treatments in Preclinical Tumor Models. J Med Chem. 2020 Jul 9;63(13):7293-7325.