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Forschungsprodukte & Biochemikalien



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Diagnostik & molekulare Diagnostik



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See the following pages for more information!



Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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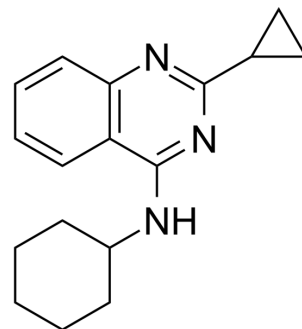
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TH10785

Cat. No.:	HY-147313
CAS No.:	1002801-51-5
Molecular Formula:	C ₁₇ H ₂₁ N ₃
Molecular Weight:	267.37
Target:	Others
Pathway:	Others
Storage:	Powder -20°C 3 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 100 mg/mL (374.01 mM)
 * "≥" means soluble, but saturation unknown.

	Solvent Concentration	Mass	1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM		3.7401 mL	18.7007 mL	37.4014 mL
	5 mM		0.7480 mL	3.7401 mL	7.4803 mL
	10 mM		0.3740 mL	1.8701 mL	3.7401 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.5 mg/mL (9.35 mM); Suspended solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (9.35 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.5 mg/mL (9.35 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

TH10785 is a DNA glycosylase 1 (OGG1) activator, TH10785 can interact with the phenylalanine-319 and glycine-42 amino acids of OGG1 and increase the enzyme activity, generates β, δ-lyase enzymatic function. TH10785 can control the catalytic activity mediated by a nitrogen base within its molecular structure. TH10785 can be used for the research of various diseases and aging connected with DNA oxidative lesions^[1].

IC₅₀ & Target

OGG1 (KD=5.5 μM)^[1]

In Vitro

TH10785 (6.25 μ M, 30 min) induces a de novo β , δ -elimination in vitro, allowing for AP sites as new substrates^[1].
TH10785 (10 μ M, 0-2 min) allows OGG1 to increase DNA repair by addressing AP sites^[1].
TH10785 (0-20 μ M, 72 h) induces OGG1 β , δ -lyase activity shifts cells toward PNKP1 dependence^[1].
TH10785 (2 μ M) has affinity to OGG1 (KD=5.5 μ M) increased when adding an AP site analog containing double-stranded DNA (KD=1.3 μ M)^[1].

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

Cell Viability Assay^[1]

Cell Line:	U2OS cells
Concentration:	0-20 μ M
Incubation Time:	72 hours
Result:	Reduced combination with PNKP1 inhibition for TH10785.

Western Blot Analysis^[1]

Cell Line:	U2OS cells
Concentration:	0.65 μ M; 10 μ M
Incubation Time:	30 min; 24 h
Result:	Caused an up-regulation of members of the DDR through β , δ -elimination in combination with PNKP1 inhibition and APE1-independent de novo β , δ -elimination of AP sites by OGG1 in the presence of TH10785.

RT-PCR^[1]

Cell Line:	U2OS cells
Concentration:	10 μ M
Incubation Time:	1 h
Result:	Decreased oxidative damage in guanine-rich regions of the genome.

Immunofluorescence^[1]

Cell Line:	U2OS OGG1-GFP cells
Concentration:	1 μ M
Incubation Time:	0-2 min
Result:	Recruited more OGG1 to laser-damaged sites.

REFERENCES

[1]. Maurice Michel, et al. Small-molecule activation of OGG1 increases oxidative DNA damage repair by gaining a new function. Science. 2022 Jun 24;376(6600):1471-1476.

Caution: Product has not been fully validated for medical applications. For research use only.

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