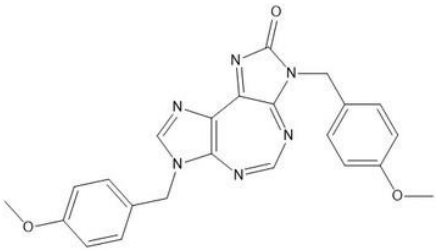
Tribioscience

RK-33, DDX3 inhibitor

Catalog	Unit
TBI4839-5MG	5 mg
TBI4839-25MG	25 mg

Product Details

Formal Name: 3,7-Bis(4-methoxybenzyl)-3,7-dihydro-1,3,4,6,7,9-hexaza-2H-cyclopenta[e]azulene-2-one
Molecular Formula: $C_{23}H_{20}N_6O_3$
Formula Weight: 428.44
CAS Number: 1070773-09-9
Purity: >98%
Formulation: powder
Solubility: Soluble in DMSO (up to 20 mg/ml)
Storage: -20°C
Stability: ≥ 1 year.



Applications

DDX3 inhibitor

Functions

Inhibitor of the RNA helicase DDX3 with IC50 = 4.4-8.4 µM in high DDX3-expressing lung cancer cell lines A549, H1299, H23, and H460. Inhibition of DDX3 led to activation of cell death pathways, inhibition of Wnt pathway signaling, and abrogation of non-homologous end-joining (NHEJ) DNA repair. RK-33 was also active in colorectal cancer, prostate cancer, and medulloblastoma cancer cell lines. RK-33 caused radiosensitization in breast cancer through inhibition of mitochondrial translation. RK-33 facilitates differentiation in human embryonic stem cells (hESC) and decreases pluripotency markers as well as reducing teratoma formation.

Application Procedures

First dissolved in DMSO (up to 20 mg/ml), then diluted to aqueous buffer. Solutions in DMSO may be stored at -20° for up to 1 month.

For research use only.

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