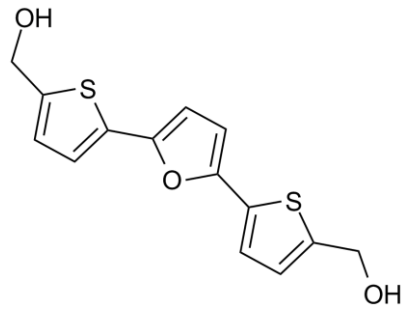
Product Name: RITA (NSC 652287)

Revision Date: 6/30/2016

Product Data Sheet

Chemical Properties



Product Name:	RITA (NSC 652287)
Cas No.:	213261-59-7
M.Wt:	292.4
Formula:	C14H12O3S2
Chemical Name:	[5-[5-[5-(hydroxymethyl)thiophen-2-yl]furan-2-yl]thiophen-2-yl]methanol
Canonical SMILES:	C1=C(SC(=C1)C2=CC=C(O2)C3=CC=C(S3)CO)CO
Solubility:	>14.6mg/mL in DMSO
Storage:	Store at -20°C
General tips:	For obtaining a higher solubility , please warm the tube at 37° C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20° C for several months.
Shopping Condition:	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request

Biological Activity

Targets :	p53
Pathways:	Apoptosis >> p53

Description:

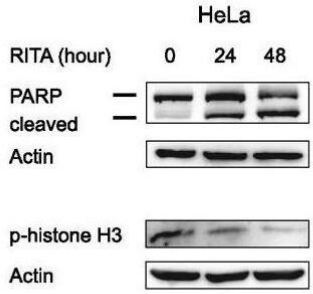
IC50: 2 nM and 20 nM for A-498 and TK-10, respectively
A series of naturally occurring and synthetic compounds containing one or more thiophene moieties have been tested in the NCI Anticancer Drug Screen and have demonstrated differential antiproliferative activity. Thiophene derivatives as a class exhibit very similar patterns of differential sensitivity, the molecular basis for which is not clear. The compound 2,5-bis(5-hydroxymethyl-2-thienyl) furan (NSC 652287), is the most potent thiophene derivative and has been selected as the lead compound for mechanistic studies.

In vitro: A number of cell lines showed a striking differential sensitivity to NSC 652287 when compared with the other cell lines in the panel, with GI50 values of 10–60 nM. The compound was found to decrease the initial number of cells by 50% (LC50) at a concentration of 100 nM in the A-498 cell line, compared with ~100 mM for the majority of the tumor cell lines. The A-498 and TK-10 cell lines were particularly sensitive to NSC 652287-induced cytotoxicity compared with ACHN and UO-31 cell lines [1].
In vivo: NSC 652287 was evaluated against A-498 tumor cell xenografts grown subcutaneously in nude mice. When NSC 652287 was administered twice a day, all three doses resulted in complete tumor regression in 100% of the treated mice by the end of the third treatment period. The tumors did not regrow during the remaining 40 days of the study, and no gross evidence of toxicity was observed. Studies with xenografts derived from other sensitive cell lines including the renal CAKI-1, melanoma UACC-257, ovarian OVCAR-5, and colon HCC-2998, showed moderate or minimal in vivo activity [2].
Clinical trials: Currenlty no clinical data are available.

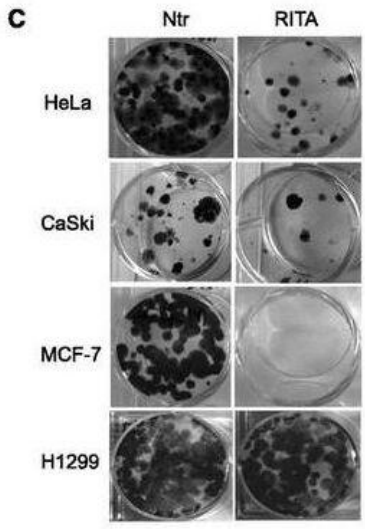
***Reference**:*

[1] Rivera MI, Stinson SF, Vistica DT, Jorden JL, Kenney S, Sausville EA. Selective toxicity of the tricyclic thiophene NSC 652287 in renal carcinoma cell lines: differential accumulation and metabolism. Biochem Pharmacol. 1999;57(11):1283-95.

Product Validation



Treatment of RITA indued PARP cleavage and decrease of phospho-H3



RITA suppresses cancer cell growth

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most ApexBio products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

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