

Small Molecules

GANT 58

Hedgehog pathway inhibitor; Inhibits GLI1

Catalog # 73982
73984

5 mg
10 mg



Scientists Helping Scientists™ | WWW.STEMCELL.COM

TOLL FREE PHONE 1 800 667 0322 • PHONE +1 604 877 0713

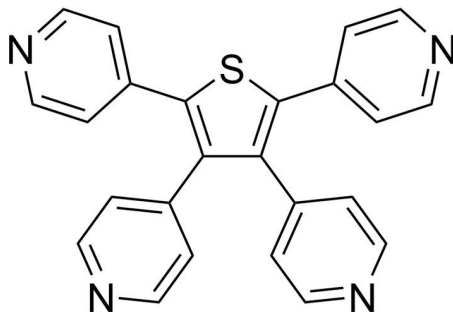
INFO@STEMCELL.COM • TECHSUPPORT@STEMCELL.COM

FOR GLOBAL CONTACT DETAILS VISIT OUR WEBSITE

Product Description

GANT 58 inhibits the Hedgehog signaling pathway downstream of Smoothened and Suppressor of Fused (SUFU) leading to GLI1 nuclear accumulation (Joo et al.; Stanton & Peng). GANT 58 demonstrates antiproliferative and antitumor activity in vivo (Beauchamp et al.; Joo et al.).

Molecular Name: GANT 58
Alternative Names: NSC 75503
CAS Number: 64048-12-0
Chemical Formula: $C_{24}H_{16}N_4S$
Molecular Weight: 392.5 g/mol
Purity: $\geq 98\%$
Chemical Name: 4,4',4'',4'''-(2,3,4,5-thiophenetetrayl)tetrakis-pyridine
Structure:



Properties

Physical Appearance: A crystalline solid
Storage: Product stable at -20°C as supplied. Protect product from prolonged exposure to light. For long-term storage store with a desiccant. For product expiry date, please contact techsupport@stemcell.com.
Solubility: $\cdot$ DMSO ≤ 2.5 mM
 $\cdot$ Absolute ethanol ≤ 3.5 mM
For example, to prepare a 1 mM stock solution in DMSO, resuspend 1 mg in 2.5 mL of DMSO.

Prepare stock solution fresh before use. Information regarding stability of small molecules in solution has rarely been reported, however, as a general guide we recommend storage in DMSO at -20°C . Aliquot into working volumes to avoid repeated freeze-thaw cycles. The effect of storage of stock solution on compound performance should be tested for each application.

Compound has low solubility in aqueous media. For use as a cell culture supplement, stock solution should be diluted into culture medium immediately before use. Avoid final DMSO concentration above 0.1% due to potential cell toxicity.

Published Applications

CANCER RESEARCH

- Reduces anchorage-independent growth in Ewing Sarcoma cells (Beauchamp et al.; Joo et al.).
- Inhibits prostate cancer tumor growth (Lauth et al.).
- Causes cell cycle arrest and apoptosis in acute leukemia T cells (Hou et al.).

References

- Beauchamp E et al. (2009) GLI1 Is a direct transcriptional target of EWS-FLI1 oncoprotein. J Biol Chem 284(14): 9074–82.
- Hou X et al. (2014) Inhibition of hedgehog signaling by GANT58 induces apoptosis and shows synergistic antitumor activity with AKT inhibitor in acute T cell leukemia cells. Biochimie 101: 50–9.
- Joo J et al. (2009) GLI1 is a central mediator of EWS/FLI1 signaling in Ewing tumors. PLoS One 4(10): e7608.
- Lauth M et al. (2007) Inhibition of GLI-mediated transcription and tumor cell growth by small-molecule antagonists. Proc Natl Acad Sci USA 104(20): 8455–60.
- Stanton BZ & Peng LF. (2010) Small-molecule modulators of the Sonic Hedgehog signaling pathway. Mol Biosyst 6(1): 44–54.

Related Small Molecules

For a complete list of small molecules available from STEMCELL Technologies, please visit our website at www.stemcell.com/smallmolecules or contact us at techsupport@stemcell.com.

STEMCELL TECHNOLOGIES INC.'S QUALITY MANAGEMENT SYSTEM IS CERTIFIED TO ISO 13485. PRODUCTS ARE FOR RESEARCH USE ONLY AND NOT INTENDED FOR HUMAN OR ANIMAL DIAGNOSTIC OR THERAPEUTIC USES UNLESS OTHERWISE STATED.

Copyright © 2017 by STEMCELL Technologies Inc. All rights reserved including graphics and images. STEMCELL Technologies & Design, STEMCELL Shield Design, and Scientists Helping Scientists are trademarks of STEMCELL Technologies Canada Inc. All other trademarks are the property of their respective holders. While STEMCELL has made all reasonable efforts to ensure that the information provided by STEMCELL and its suppliers is correct, it makes no warranties or representations as to the accuracy or completeness of such information.