

PRODUCT INFORMATION

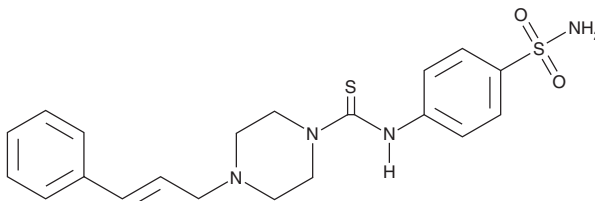


LF3

Item No. 36164

CAS Registry No.: 664969-54-4
Formal Name: N-[4-(aminosulfonyl)phenyl]-4-(3-phenyl-2-propen-1-yl)-1-piperazinecarbothioamide

MF: C₂₀H₂₄N₄O₂S₂
FW: 416.6
Purity: ≥98%
UV/Vis.: λ_{max}: 256 nm
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

LF3 is supplied as a solid. A stock solution may be made by dissolving the LF3 in the solvent of choice, which should be purged with an inert gas. LF3 is soluble in the organic solvent DMSO at a concentration of approximately 20 mg/ml.

Description

LF3 is an inhibitor of the protein-protein interaction between β-catenin and T cell factor 4 (TCF4).¹ It inhibits the β-catenin-TCF4 interaction in an immunoprecipitation assay and prevents β-catenin-induced inhibition of SCN5A promoter activity in HEK293 cells when used at a concentration of 10 μM. LF3 increases levels of the voltage-gated sodium channel Na_v1.5 in HL-1 cardiomyocytes. It is cytotoxic to GES-1, HGC-27, MKN45, and AGS gastric cancer cells (IC₅₀s = 24.68, 18.2, 489, and 56.76 μM, respectively).² *In vivo*, LF3 (25 mg/kg) decreases pulmonary artery systolic pressure (PASP) and the right ventricular hypertrophy index (RVHI) in a rat model of total pneumonectomy-induced pulmonary hypertension.³

References

1. Zhao, L., Sun, L., Lu, Y., *et al.* A small-molecule LF3 abrogates β-catenin/TCF4-mediated suppression of Na_v1.5 expression in HL-1 cardiomyocytes. *J. Mol. Cell. Cardiol.* **135**, 90-96 (2019).
2. Yu, Z., Jiang, X., Qin, L., *et al.* A novel UBE2T inhibitor suppresses Wnt/β-catenin signaling hyperactivation and gastric cancer progression by blocking RACK1 ubiquitination. *Oncogene* **40**(5), 1027-1042 (2021).
3. Lei, Y., Yang, Q., Nie, Y., *et al.* Small-molecule inhibitor LF3 restrains the development of pulmonary hypertension through the Wnt/β-catenin pathway. *Acta Biochim Biophys. Sin. (Shanghai)* **53**(10), (2021).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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