Retro-2
Item No. 21946

CAS Registry No.: 1429192-00-6
Formal Name: 2,3-dihydro-2-(5-methyl-2-thienyl)-3-phenyl-4(1H)-quinazolinone
MF: C_{19}H_{16}N_{2}O_{5}
FW: 320.4
Purity: \( \geq 98\% \)
UV/Vis.: \( \lambda_{ \text{max} } = 226 \text{ nm} \)
Supplied as: A crystalline solid
Storage: -20°C
Stability: \( \geq 2\text{ years} \)

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

**Laboratory Procedures**

Retro-2 is supplied as a crystalline solid. A stock solution may be made by dissolving the Retro-2 in the solvent of choice. Retro-2 is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of Retro-2 in these solvents is approximately 5 mg/ml. Retro-2 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, Retro-2 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Retro-2 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

**Description**

Retro-2 is a selective inhibitor of retrograde protein trafficking mediated by syntaxin-5 at the interface between the endosome and trans-Golgi network, with no discernable effects on other intracellular trafficking pathways.\(^1\,^2\) Retro-2 inhibits ebolavirus infection with an EC\(_{50}\) value of 12.2 µM and reduces ricin-induced toxicity by 2.7-fold when used at a concentration of 20 µM in HeLa cells.\(^2\,^3\) Retro-2 also blocks JC polyomavirus, BK polyomavirus, and SV40 infectivity in Vero green monkey kidney epithelial cells in vitro (EC\(_{50}\)s = 28.4, 61.2, and 58.6 µM, respectively).\(^4\) In mouse models, Retro-2 improves survival and reduces symptoms following infection with Shiga toxin-producing *E. coli* when administered at a dose of 100 mg/kg and protects against ricin challenge when administered prophylactically at a dose of 2 mg/kg.\(^2\,^5\)

**References**