

## Catalog #10-1390 CHS-828

200484-11-3

N-[6-(4-Chlorophenoxy)hexyl]-N'-cyano-N"-4-pyridinyl-guanidine; GMX-1778 Lot # X104606

A potent and selective inhibitor of nicotinamide phosphoribosyltransferase (NAMPT), the rate-limiting enzyme in the biosynthesis of NAD, which may be used to deplete cells of NAD.<sup>1</sup> Displays potent cytotoxic effects in tumor cells.<sup>2,3</sup> Displays antitumor activity *in vivo*.<sup>3</sup> Increases ROS levels in cancer cells but not in normal cells.<sup>4</sup>

- 1) Olesen et al. (2008), Anticancer agent CHS-828 inhibits cellular synthesis of NAD; Biochem.Biophys.Res.Commun. **376** 799
- 2) Hassan et al. (2006), CHS 828 kill tumor cells by inhibiting the nuclear factor-kappaB translocation but unlikely through down-regulation of proteasome; Anticancer Res. **26** 4431
- 3) Hjarnaa et al. (1999), CHS 828, a novel pyridyl cyanoguanidine with potent antitumor activity in vitro and in vivo; Cancer Res. **59** 5751
- 4) Cerna et al. (2012) Inhibition of nicotinamide phosphoribosyltransferase (NAMPT) activity by small molecule GMX1778 regulates reactive oxygen species (ROS)-mediated cytotoxicity in a p53- and nicotinic acid phosphoribosyltransferase1 (NAPRT1)-dependent manner; J.Biol.Chem. 287 22408

## **PHYSICAL DATA**

Molecular Weight: 371.86

 $\begin{tabular}{ll} Molecular Formula: & $C_{19}H_{22}CIN_5O$ \\ Purity: & $>98\% (TLC)$ \\ \end{tabular}$ 

NMR: (Conforms)

Solubility: DMSO (25 mg/mL)

Physical Description: White solid

Storage and Stability: Store as supplied at -20°C for up to 1 year from the date of purchase. Solutions in

DMSO may be stored at -20°C for up to 3 months.