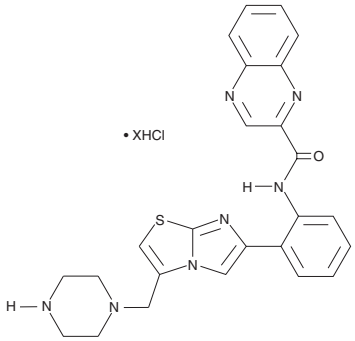
PRODUCT INFORMATION

SRT 1720 (hydrochloride)

Item No. 10011020

CAS Registry No.: 1001645-58-4
Formal Name: N-[2-[3-(1-piperazinylmethyl) imidazo[2,1-b]thiazol-6-yl]phenyl]-2-quinoxalinecarboxamide, hydrochloride
Synonyms: CAY10559, SRT 1933
MF: $C_{25}H_{23}N_7OS \bullet XHCl$
FW: 469.6
Purity: ≥98%
UV/Vis.: λ_{max}: 244 nm
Supplied as: A crystalline 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

SRT 1720 (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the SRT 1720 (hydrochloride) in the solvent of choice, which should be purged with an inert gas. SRT 1720 (hydrochloride) is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of SRT 1720 (hydrochloride) in these solvents is approximately 10 and 1 mg/ml, respectively.

SRT 1720 (hydrochloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, SRT 1720 (hydrochloride) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. SRT 1720 (hydrochloride) 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

Sirtuins (SIRTs) represent a distinct class of trichostatin A-insensitive lysyl-deacetylases (class III HDACs). Human SIRT1 is the homolog of yeast silent information regulator 2 (Sir2) and has been shown to regulate the activity of the p53 tumor suppressor and inhibit apoptosis. Small molecule activators of SIRT1, such as resveratrol, extend lifespan in yeast and *C. elegans* in a manner that resembles caloric restriction. SRT 1720 is a selective small molecule activator of SIRT1 that is 1,000-fold more potent than resveratrol ($EC_{1.5}$ = 0.16 *versus* 46.2 µM, respectively).[1] In diet-induced obese and diabetic leptin-deficient *ob/ob* mice, oral administration of 100 mg/kg SRT 1720 once daily improves insulin sensitivity, lowers plasma glucose and increases mitochondrial capacity after one week of treatment.[1] In Zucker *fa/fa* rats, SRT 1720 improves whole-body glucose homeostasis and insulin sensitivity in adipose tissue, skeletal muscle, and liver.[1]

Reference

1. Milne, J.C., Lambert, P.D., Schenk, S., *et al.* Small molecule activators of SIRT1 as therapeutics for the treatment of type 2 diabetes. *Nature* **450(7170)**, 712-716 (2007).

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