

PRODUCT INFORMATION



ON-01910 (sodium salt)

Item No. 15553

CAS Registry No.: 1225497-78-8
Formal Name: N-[2-methoxy-5-[[[2-(2,4,6-trimethoxyphenyl)ethenyl]sulfonyl]methyl]phenyl]-glycine, monosodium salt

Synonym: Rigosertib
MF: C₂₁H₂₅NO₈S • Na

FW: 473.5

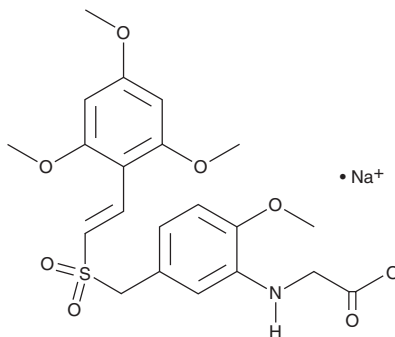
Purity: ≥98%

UV/Vis.: λ_{max}: 214, 241, 304 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

ON-01910 (sodium salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the ON-01910 (sodium salt) in the solvent of choice, which should be purged with an inert gas. ON-01910 (sodium salt) is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of ON-01910 (sodium salt) in these solvents is approximately 30 mg/ml.

ON-01910 (sodium salt) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, ON-01910 (sodium salt) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. ON-01910 (sodium salt) has a solubility of approximately 0.14 mg/ml in a 1:6 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

ON-01910 is a potent, non-ATP-competitive inhibitor of polo-like kinase 1 (Plk1; IC₅₀ = 9 nM), a serine/threonine protein kinase involved in the regulation of cell cycling.¹ It induces apoptosis in a wide array of tumor cell lines (GI₅₀ = 50-200 nM) and blocks the growth of multidrug resistant cancer cell lines.¹⁻⁴ ON-01910 is active *in vivo* when administered intraperitoneally and synergizes with chemotherapeutic agents, preventing tumor growth or abolishing tumors in human xenograft nude mouse models.¹

References

1. Gumireddy, K., Reddy, M.V.R., Cosenza, S.C., *et al.* ON01910, a non-ATP-competitive small molecule inhibitor of Plk1, is a potent anticancer agent. *Cancer Cell* **7(3)**, 275-286 (2005).
2. Chapman, C.M., Sun, X., Roschewski, M., *et al.* ON 01910.Na is selectively cytotoxic for chronic lymphocytic leukemia cells through a dual mechanism of action involving PI3K/AKT inhibition and induction of oxidative stress. *Clin. Cancer Res.* **18(7)**, 1979-1991 (2012).
3. Oussenko, I.A., Holland, J.F., Reddy, E.P., *et al.* Effect of ON 01910.Na, an anticancer mitotic inhibitor, on cell-cycle progression correlates with RanGAP1 hyperphosphorylation. *Cancer Res.* **71(14)**, 4968-4976 (2011).
4. Chang, K.-C., Chang, W.-C., Chang, Y., *et al.* Ran GTPase-activating protein 1 is a therapeutic target in diffuse large B-cell lymphoma. *PLoS One* **8(11)**, 1-12 (2013).

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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