

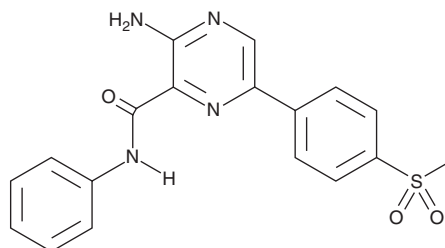
# PRODUCT INFORMATION



## VE-821

Item No. 17587

**CAS Registry No.:** 1232410-49-9  
**Formal Name:** 3-amino-6-[4-(methylsulfonyl)phenyl]-N-phenyl-2-pyrazinecarboxamide  
**Synonym:** ATR Inhibitor IV  
**MF:** C<sub>18</sub>H<sub>16</sub>N<sub>4</sub>O<sub>3</sub>S  
**FW:** 368.4  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 224, 304, 382 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

VE-821 is supplied as a crystalline solid. A stock solution may be made by dissolving the VE-821 in the solvent of choice, which should be purged with an inert gas. VE-821 is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of VE-821 in these solvents is approximately 20 and 50 mg/ml, respectively.

VE-821 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, VE-821 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. VE-821 has a solubility of approximately 0.3 mg/ml in a 1:2 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Ataxia-telangiectasia and Rad3-related protein (ATR) is a serine/threonine kinase that activates DNA processes related to the DNA damage response. VE-821 is an ATP-competitive inhibitor of ATR (IC<sub>50</sub> = 26 nM).<sup>1,2</sup> It augments DNA damage and cell death of cancer cells in response to radiation under normal and hypoxic conditions.<sup>2-4</sup> VE-821 also sensitizes cancer cells to chemotherapy.<sup>3,5,6</sup>

### References

1. Reaper, P.M., Griffiths, M.R., Long, J.M., *et al.* Selective killing of ATM- or p53-deficient cancer cells through inhibition of ATR. *Nat. Chem. Biol.* **7**(7), 428-430 (2011).
2. Pires, I.M., Olcina, M.M., Anbalagan, S., *et al.* Targeting radiation-resistant hypoxic tumour cells through ATR inhibition. *Br. J. Cancer* **107**, 291-299 (2012).
3. Prevo, R., Fokas, E., Reaper, P.M., *et al.* The novel ATR inhibitor VE-821 increases sensitivity of pancreatic cancer cells to radiation and chemotherapy. *Cancer Biol. Ther.* **13**(11), 1072-1081 (2012).
4. Salovska, B., Fabrik, I., Durisova, K., *et al.* Radiosensitization of human leukemic HL-60 cells by ATR kinase inhibitor (VE-821): Phosphoproteomic analysis. *Int. J. Mol. Sci.* **15**, 12007-12026 (2014).
5. Huntoon, C.J., Flatten, K.S., Wahner Hendrickson, A.E., *et al.* ATR inhibition broadly sensitizes ovarian cancer cells to chemotherapy independent of BRCA status. *Cancer Res.* **73**(12), 3683-3691 (2013).
6. Flynn, R.L., Cox, K.E., Jeitany, M., *et al.* Alternative lengthening of telomeres renders cancer cells hypersensitive to ATR inhibitors. *Science* **347**(6219), 273-277 (2015).

#### 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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