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**Product Data Sheet**

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Product Name: PAD2-IN-1

Cat. No.: GC64367

**Chemical Properties**

Cas. No. 2095109-82-1

Formula C<sub>25</sub>H<sub>29</sub>FN<sub>6</sub>O<sub>3</sub> M.Wt 480.53

Solubility Storage Store at -20°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure **Background**

PAD2-IN-1, a benzimidazole-based derivative, is a potent and selective protein arginine deiminase 2 (PAD2) inhibitor. PAD2-IN-1 shows superior selectivity for PAD2 over PAD4 (95-fold) and PAD3 (79-fold)[1].

In the target engagement assay, the EC 50 of PAD2-IN-1 (compound 32a) is 8.3 μM in HEK293T/PAD2 cells, the enhanced potency of PAD2-IN-1 overcomes its relatively poor ability to enter cells[1]. PAD2-IN-1 (compound 32a; 1-25 μM) treatment strongly inhibits histone H3 citrullination with an EC 50 of 2.7 μM in HEK293T/PAD2 cells[1].

[1]. Aaron Muth, et al. Development of a Selective Inhibitor of Protein Arginine Deiminase 2. J Med Chem. 2017 Apr 13;60(7):3198-3211.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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