

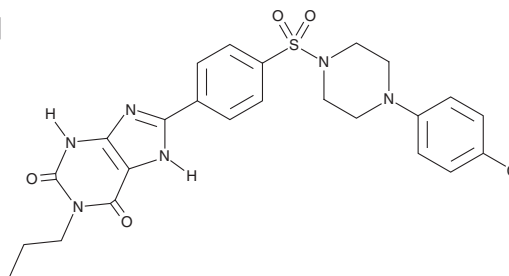
# PRODUCT INFORMATION



## PSB-603

Item No. 25637

**CAS Registry No.:** 1092351-10-4  
**Formal Name:** 8-[4-[[4-(4-chlorophenyl)-1-piperazinyl]sulfonyl]phenyl]-3,9-dihydro-1-propyl-1H-purine-2,6-dione  
**MF:** C<sub>24</sub>H<sub>25</sub>ClN<sub>6</sub>O<sub>4</sub>S  
**FW:** 529.0  
**Purity:** ≥90%  
**UV/Vis.:** λ<sub>max</sub>: 252, 328 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

PSB-603 is supplied as a crystalline solid. A stock solution may be made by dissolving the PSB-603 in the solvent of choice, which should be purged with an inert gas. PSB-603 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of PSB-603 in these solvents is approximately 5 mg/ml. PSB-603 is slightly soluble in ethanol.

PSB-603 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, PSB-603 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. PSB-603 has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

PSB-603 is an antagonist of the adenosine A<sub>2B</sub> receptor (K<sub>i</sub> = 0.553 nM).<sup>1</sup> It is selective for adenosine A<sub>2B</sub> over A<sub>1</sub>, A<sub>2A</sub>, and A<sub>3</sub> receptors (K<sub>i</sub>s = >10,000 nM). It reduces intracellular calcium concentrations in Jurkat T cells expressing the human A<sub>2B</sub> receptor (IC<sub>50</sub> = 1.13 nM). PSB-603 reduces Zika viral plaque formation (IC<sub>50</sub> = 43.8 nM) without affecting cell viability of A549 cells when used at concentrations up to 1 μM.<sup>2</sup> *In vivo*, PSB-603 (0.25 μg/head, i.p.) delays tumor growth and reduces tumor volume and the number of pulmonary metastases in the B16 mouse model of melanoma *via* inhibition of induction of regulatory T cells.<sup>3</sup>

### References

1. Borrmann, T., Hinz, S., Bertarelli, D.C., *et al.* 1-alkyl-8-(piperazine-1-sulfonyl)phenylxanthines: Development and characterization of adenosine A<sub>2B</sub> receptor antagonists and a new radioligand with subnanomolar affinity and subtype specificity. *J. Med. Chem.* **52**(13), 3994-4006 (2009).
2. Micewicz, E.D., Khachatoorian, R., French, S.W., *et al.* Identification of novel small-molecule inhibitors of Zika virus infection. *Bioor. Med. Chem. Lett.* **28**(3), 452-458 (2018).
3. Kaji, W., Tanaka, S., Tsukimoto, M., *et al.* Adenosine A<sub>2B</sub> receptor antagonist PSB603 suppresses tumor growth and metastasis by inhibiting induction of regulatory T cells. *J. Toxicol. Sci.* **39**(2), 191-198 (2014).

#### 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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