

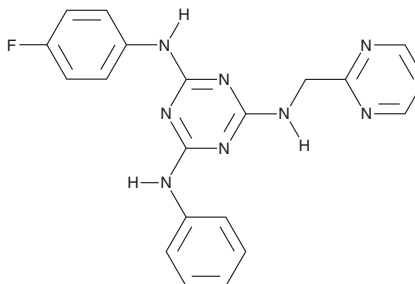
# PRODUCT INFORMATION



## ASP2905

Item No. 40780

**CAS Registry No.:** 792184-90-8  
**Formal Name:** N<sup>2</sup>-(4-fluorophenyl)-N<sup>4</sup>-phenyl-N<sup>6</sup>-(2-pyrimidinylmethyl)-1,3,5-triazine-2,4,6-triamine  
**MF:** C<sub>20</sub>H<sub>17</sub>FN<sub>8</sub>  
**FW:** 388.4  
**Purity:** ≥95%  
**Supplied as:** A 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

ASP2905 is supplied as a solid. A stock solution may be made by dissolving the ASP2905 in the solvent of choice, which should be purged with an inert gas. ASP2905 is soluble (≥10 mg/ml) in DMSO.

### Description

ASP2905 is an inhibitor of voltage-gated potassium channel K<sub>v</sub>12.2.<sup>1</sup> It inhibits potassium currents in CHO cells expressing K<sub>v</sub>12.2 (IC<sub>50</sub> = 9 nM). ASP2905 is selective for K<sub>v</sub>12.2 over 55 transmembrane proteins at 10 μM. It reduces the frequency of spontaneous inhibitory postsynaptic currents (IPSCs) in primary rat hippocampal neurons when used at concentrations of 0.1 and 1 μM. ASP2905 increases dopamine and acetylcholine efflux in the rat medial prefrontal cortex and improves latent learning in the water-finding task in mice.<sup>2</sup> It also reduces hyperlocomotion induced by phencyclidine (PCP) in mice when administered at doses of 0.03, 0.1, and 0.3 mg/kg and reduces PCP-induced increases in immobility in mice in the forced swim test at 0.01 and 0.1 mg/kg.<sup>3</sup>

### References

1. Takahashi, S., Inamura, K., Yarimizu, J., *et al.* Neurochemical and neuropharmacological characterization of ASP2905, a novel potent selective inhibitor of the potassium channel KCNH3. *Eur. J. Pharmacol.* **810**, 26-35 (2017).
2. Takahashi, S., Ohmiya, M., Honda, S., *et al.* The KCNH3 inhibitor ASP2905 shows potential in the treatment of attention deficit/hyperactivity disorder. *PLoS One* **13(11)**, e0207750 (2018).
3. Takahashi, S., Okamura, A., Yamazaki, M., *et al.* ASP2905, a specific inhibitor of the potassium channel Kv12.2 encoded by the *Kcnh3* gene, is psychoactive in mice. *Behav. Brain Res.* **378**:112315, (2020).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

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