

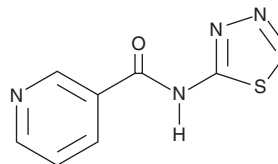
# PRODUCT INFORMATION



## TGN 020

Item No. 30955

CAS Registry No.: 51987-99-6  
Formal Name: N-1,3,4-thiadiazol-2-yl-3-pyridinecarboxamide  
MF:  $C_8H_6N_4OS$   
FW: 206.2  
Purity:  $\geq 98\%$   
UV/Vis.:  $\lambda_{max}$ : 220, 268 nm  
Supplied as: A solid  
Storage:  $-20^{\circ}C$   
Stability:  $\geq 4$  years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

TGN 020 is supplied as a solid. A stock solution may be made by dissolving the TGN 020 in the solvent of choice, which should be purged with an inert gas. TGN 020 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of TGN 020 in ethanol and DMF is approximately 0.1 mg/ml and approximately 2 mg/ml in DMSO.

TGN 020 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, TGN 020 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. TGN 020 has a solubility of approximately 0.1 mg/ml in a 1:9 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

TGN 020 is an aquaporin-4 (AQP4) inhibitor ( $IC_{50} = 3.1 \mu M$  in *X. laevis* oocytes transfected with AQP4).<sup>1</sup> It reduces brain edema and cortical infarction size in a mouse model of transient focal cerebral ischemia induced by middle cerebral artery occlusion (MCAO) when administered at a dose of 200 mg/kg.<sup>2</sup> TGN 020 (200 mg/kg every 6 hours) reduces bronchoalveolar lavage fluid (BALF) IL-1 $\alpha$ , IL-1 $\beta$ , IL-6, TNF- $\alpha$ , IL-23, and IL-17A levels and neutrophil infiltration, as well as increases survival, in a mouse model of LPS-induced acute lung injury.<sup>3</sup>

### References

1. Huber, V.J., Tsujita, M., and Nakada, T. Identification of aquaporin 4 inhibitors using in vitro and in silico methods. *Bioorg. Med. Chem.* **17**(1), 411-417 (2009).
2. Igarashi, H., Huber, V.J., Tsujita, M., et al. Pretreatment with a novel aquaporin 4 inhibitor, TGN-020, significantly reduces ischemic cerebral edema. *Neurol. Sci.* **32**(1), 113-116 (2011).
3. Guo, C., Wu, T., Zhu, H., et al. Aquaporin 4 blockade attenuates acute lung injury through inhibition of Th17 cell proliferation in mice. *Inflammation* **42**(4), 1401-1412 (2019).

#### 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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