

# Product data sheet



MedKoo Cat#: 555644 Name: AER-271 CAS#: 634913-39-6 Chemical Formula: C <sub>15</sub> H <sub>9</sub> ClF <sub>6</sub> NO <sub>5</sub> P Exact Mass: 462.9811 Molecular Weight: 463.6532	
Product supplied as:	Powder
Purity (by HPLC):	≥ 98%
Shipping conditions	Ambient temperature
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years. In solvent: -80°C 3 months; -20°C 2 weeks.

## 1. Product description:

AER-271 is a potent aquaporin-4 (AQP4) inhibitor. AER-271 blocks acute cerebral edema and improves early outcome in a pediatric model of asphyxial cardiac arrest. Treatment with AER-271 ameliorated early cerebral edema measured at 3 h after CA vs vehicle treated rats. This treatment also attenuated early NDS. In contrast to rats treated with vehicle after CA, rats treated with AER-271 did not develop significant neuronal death or neuroinflammation as compared to sham.

## 2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under “QC And Documents” section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

## 3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMSO	125.0	269.60

## 4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.16 mL	10.78 mL	21.57 mL
5 mM	0.43 mL	2.16 mL	4.31 mL
10 mM	0.22 mL	1.08 mL	2.16 mL
50 mM	0.04 mL	0.22 mL	0.43 mL

## 5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of “Calculator”

## 6. Recommended literature which reported protocols for in vitro and in vivo study

In vitro study

TBD

In vivo study

1. Wallisch JS, Janesko-Feldman K, Alexander H, Jha RM, Farr GW, McGuirk PR, Kline AE, Jackson TC, Pelletier MF, Clark RSB, Kochanek PM, Manole MD. The aquaporin-4 inhibitor AER-271 blocks acute cerebral edema and improves early outcome in a pediatric model of asphyxial cardiac arrest. *Pediatr Res*. 2019 Mar;85(4):511-517. doi: 10.1038/s41390-018-0215-5. Epub 2018 Oct 26. PMID: 30367162; PMCID: PMC6397683.

## 7. Bioactivity

Biological target:

AER-271, a phosphonate prodrug derivative of AER-270, is an aquaporin-4 (AQP4) inhibitor.

In vitro activity

TBD

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## In vivo activity

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At 3 h post-CA %BW was increased in CA-vehicle-treated vs. naïve rats (83.84 [83.16, 83.39]) vs. 83.17 [82.68, 83.28] respectively,  $p < 0.05$ ) (Figure 2a). AER-271 treatment prevented the acute increase in %BW (83.29 [83.16, 83.39], CA-AER-271 vs naïve NS) and reduced the amount of edema present at 3 h by 82.1%, returning %BW nearly to the naïve value. %BW in the injury cohorts decreased towards levels of naïve rats at 6 h and 24 h post-CA (Figure 2b-c).

Reference: *Pediatr Res.* 2019 Mar; 85(4): 511–517. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6397683/>

*Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.*