Product data sheet



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MedKoo Cat#: 561359		
Name: RA-839		
CAS: 1832713-02-6		
Chemical Formula: C ₂₅ H	$I_{28}N_2O_4S$	
Exact Mass: 452.177		
Molecular Weight: 452.	ĺ	
Product supplied as:	Powder	
Purity (by HPLC):	$\geq 98\%$	
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.	

Product description:

RA-839 is a noncovalent small molecule binder to Keap1 and selective activator of Nrf2 signaling. RA-839 also suppresses LPS-induced iNOS and nitric oxide expression in macrophages.

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	45.26	100

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.21 mL	11.05 mL	22.1 mL
5 mM	0.44 mL	2.21 mL	4.42 mL
10 mM	0.22 mL	1.1 mL	2.21 mL
50 mM	0.04 mL	0.22 mL	0.44 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

 Patra U, Mukhopadhyay U, Sarkar R, Mukherjee A, Chawla-Sarkar M. RA-839, a selective agonist of Nrf2/ARE pathway, exerts potent anti-rotaviral efficacy in vitro. Antiviral Res. 2019 Jan;161:53-62. doi: 10.1016/j.antiviral.2018.11.009. Epub 2018 Nov 19. PMID: 30465784.

In vivo study

 Winkel AF, Engel CK, Margerie D, Kannt A, Szillat H, Glombik H, Kallus C, Ruf S, Güssregen S, Riedel J, Herling AW, von Knethen A, Weigert A, Brüne B, Schmoll D. Characterization of RA839, a Noncovalent Small Molecule Binder to Keap1 and Selective Activator of Nrf2 Signaling. J Biol Chem. 2015 Nov 20;290(47):28446-28455. doi: 10.1074/jbc.M115.678136. Epub 2015 Oct 12. PMID: 26459563; PMCID: PMC4653701.

7. Bioactivity

Biological target:

RA 839 is an Nrf2 activator; it inhibits Nrf2/Keap1 interaction (Kd = 6μ M). RA 839 suppresses LPS-induced iNOS and nitric oxide expression in macrophages and is anti-inflammatory.

In vitro activity

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RA-839 inhibits Rotavirus (RV) RNA and protein expression, viroplasm formation, yield of virion progeny and virus-induced cytopathy independent of RV strains. This study demonstrates that RA-839 is a potent antagonist of RV propagation in vitro and can be developed as anti-rotaviral therapeutics.

Reference: Antiviral Res. 2019 Jan;161:53-62. https://pubmed.ncbi.nlm.nih.gov/30465784/

In vivo activity

RA839 prevented the induction of both inducible nitric-oxide synthase expression and nitric oxide release in response to lipopolysaccharides in macrophages. In mice, RA839 acutely induced Nrf2 target gene expression in the liver. RA839 is a selective inhibitor of the Keap1/Nrf2 interaction and a useful tool compound to study the biology of Nrf2.

Reference: J Biol Chem. 2015 Nov 20;290(47):28446-28455. https://pubmed.ncbi.nlm.nih.gov/26459563/

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.