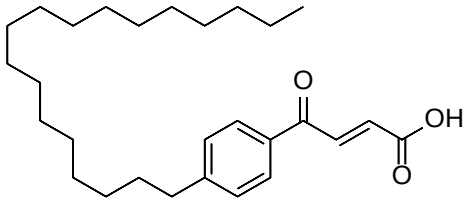
Product data sheet

MedKoo Cat#: 574585 Name: OBAA CAS: 221632-26-4 Chemical Formula: $C_{28}H_{44}O_3$ Exact Mass: 428.329 Molecular Weight: 428.657	
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:
OBAA is a potent inhibitor of phospholipase A2 that reduces bronchospasm in guinea pigs in vivo.

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
TBD	TBD	TBD

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	**1 mg**	**5 mg**	**10 mg**
1 mM	2.33 mL	11.66 mL	23.33 mL
5 mM	0.47 mL	2.33 mL	4.67 mL
10 mM	0.23 mL	1.17 mL	2.33 mL
50 mM	0.05 mL	0.23 mL	0.47 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

1. Chen M, Xiao CY, Hashizume H, Abiko Y. Phospholipase A2 is not responsible for lysophosphatidylcholine-induced damage in cardiomyocytes. Am J Physiol. 1998 Nov;275(5):H1782-7. doi: 10.1152/ajpheart.1998.275.5.H1782. PMID: 9815086.

2. Köhler T, Heinisch M, Kirchner M, Peinhardt G, Hirschelmann R, Nuhn P. Phospholipase A2 inhibition by alkylbenzoylacrylic acids. Biochem Pharmacol. 1992 Aug 18;44(4):805-13. doi: 10.1016/0006-2952(92)90419-j. PMID: 1324685.

In vivo study

1. Aydinoglu F, Ogulener N. The role of arachidonic acid/cyclooxygenase cascade, phosphodiesterase IV and Rho-kinase in H2S-induced relaxation in the mouse corpus cavernosum. Pharmacol Rep. 2017 Aug;69(4):610-615. doi: 10.1016/j.pharep.2017.02.018. Epub 2017 Feb 24. PMID: 28501682.

2. Köhler T, Heinisch M, Kirchner M, Peinhardt G, Hirschelmann R, Nuhn P. Phospholipase A2 inhibition by alkylbenzoylacrylic acids. Biochem Pharmacol. 1992 Aug 18;44(4):805-13. doi: 10.1016/0006-2952(92)90419-j. PMID: 1324685.

7. Bioactivity
Biological target:

(2E)-OBAA is a potent phospholipase A2 (PLA2) inhibitor, with an IC50 of 70 nM.

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In vitro activity

The present study examined whether LPC activates phospholipase A2 (PLA2) and whether the activation of PLA2 is responsible for the LPC-induced cell damage in isolated rat cardiomyocytes. Three PLA2 inhibitors, 7, 7-dimethyl-(5Z,8Z)-eicosadienoic acid (DEDA), 3-(4-octadecylbenzoyl)acrylic acid (OBAA), and manoalide, attenuated the LPC-induced accumulation of unsaturated NEFA to a similar degree. Nevertheless, whereas both DEDA and OBAA attenuated the LPC-induced increase in [Ca2+]i, change in cell shape, and release of CK, manoalide attenuated none of them.

Reference: Am J Physiol. 1998 Nov;275(5):H1782-7. https://pubmed.ncbi.nlm.nih.gov/9815086/

In vivo activity

This study investigated the possible role of arachidonic acid/cyclooxygenase cascade, phosphodiesterase IV (PDEIV) and Rho-kinase in exogenous hydrogen sulfide (H2S)-induced relaxation in mouse corpus cavernosum. H2S-induced relaxations were significantly reduced by OBAA, indomethacin and proadifen but not baicalein.

Reference: Pharmacol Rep. 2017 Aug;69(4):610-615. https://pubmed.ncbi.nlm.nih.gov/28501682/

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.