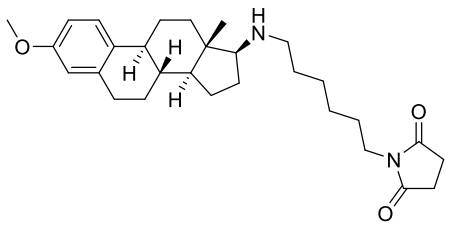
Product data sheet

MedKoo Cat#: 510296 Name: U-73343 CAS#: 142878-12-4 Chemical Formula: $C_{29}H_{42}N_2O_3$ Exact Mass: 466.31954 Molecular Weight: 466.65	
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:

U-73343 is a negative control (or inactive analogue) of U73122, which is a putative phospholipase C inhibitor. U73343 was found to inhibit TxA2 formation; it therefore partially inhibited the rise in [Ca2+]i evoked by low concentrations of thrombin, by thapsigargin or by collagen. U73343 had a greater effect than aspirin on the action of collagen, indicating an action on the TxA2-independent component of the signal, via PLC gamma-U73343 lowered TxA2 production by inhibiting the activation of cPLA2, probably at a tyrosine phosphorylation step. U73343 seems to inhibit only the tyrosine kinases involved in the activation of PLC gamma and the generation of TxA2.

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	3.89	8.34
DMF	2.0	4.29
Ethanol	1.29	2.76

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.14 mL	10.71 mL	21.43 mL
5 mM	0.43 mL	2.14 mL	4.29 mL
10 mM	0.21 mL	1.07 mL	2.14 mL
50 mM	0.04 mL	0.21 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

1. Zhao L, Levine ES. BDNF-endocannabinoid interactions at neocortical inhibitory synapses require phospholipase C signaling. J Neurophysiol. 2014 Mar;111(5):1008-15. doi: 10.1152/jn.00554.2013. Epub 2013 Dec 11. PMID: 24335212; PMCID: PMC3949235.
2. Dai Y, Dudek NL, Li Q, Muma NA. Phospholipase C, Ca2+, and calmodulin signaling are required for 5-HT2A receptor-mediated transamidation of Rac1 by transglutaminase. Psychopharmacology (Berl). 2011 Feb;213(2-3):403-12. doi: 10.1007/s00213-010-1984-7. Epub 2010 Aug 18. PMID: 20717650; PMCID: PMC3033764.

In vivo study

1. Mori Y, Eguchi K, Yoshii K, Ohtubo Y. Selective expression of muscarinic acetylcholine receptor subtype M3 by mouse type III taste bud cells. Pflugers Arch. 2016 Nov;468(11-12):2053-2059. doi: 10.1007/s00424-016-1879-5. Epub 2016 Sep 14. PMID: 27628900; PMCID: PMC5138268.

2. Kim JC, Woo SH. Shear stress induces a longitudinal Ca(2+) wave via autocrine activation of P2Y1 purinergic signalling in rat atrial myocytes. J Physiol. 2015 Dec 1;593(23):5091-109. doi: 10.1113/JP271016. Epub 2015 Nov 4. PMID: 26377030; PMCID: PMC4666989.

7. Bioactivity

Biological target:

U-73343, works as a protonophore, is an inactive analog of U-73122 and can be used as a negative control.

In vitro activity

As shown in Fig. 2A and D, U-73122 prevented the effect of BDNF (97.3 ± 5.7% of baseline, n = 6; baseline, 814.1 ± 148.6 pA; BDNF, 825.8 ± 191.4 pA). In contrast, the inactive analog U-73343 (5 μM) did not block the BDNF effect (Fig. 2B and D).

Reference: J Neurophysiol. 2014 Mar 1; 111(5): 1008–1015. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3949235/

In vivo activity

The application of 1 μM U73122, a phospholipase C (PLC) inhibitor, to the basolateral membrane side significantly decreased the Ca2+ response to 0.31 ± 0.22 times the magnitude of the control response (n = 5, $p < 0.008$, one-tailed paired t test; Fig. 4b). Washing the mouse taste bud with the control bathing solution failed to recover the magnitude of the response. The application of 1 μM U73343, a negative control, had no effects (0.90 ± 0.21, n = 5, $p > 0.14$ one-tailed paired t test; Fig. 4c).

Reference: Pflugers Arch. 2016; 468(11): 2053–2059. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5138268/

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.