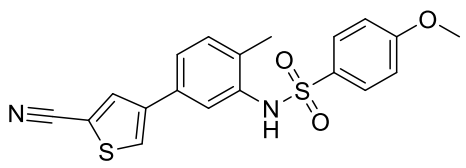
Product data sheet

MedKoo Cat#: 407461 Name: EL102 CAS#: 1233948-61-2 Chemical Formula: $C_{19}H_{16}N_2O_3S_2$ Exact Mass: 384.0602 Molecular Weight: 384.468	
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:

EL102 is a dual-inhibitor of apoptosis and angiogenesis. EL102 shows pre-clinical in vitro and in vivo activity against prostate cancer and circumvents MDR1 resistance. EL102 has in vitro activity against prostate cancer, characterised by accumulation in G2/M, induction of apoptosis, inhibition of Hif1α, and inhibition of tubulin polymerisation and decreased microtubule stability. In vivo, a combination of EL102 and docetaxel exhibits superior tumour inhibition. EL102 shows potential as both a single agent and within combination regimens for the treatment of prostate cancer, particularly in the chemoresistance setting.

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	36.0	93.64

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.60 mL	13.00 mL	26.01 mL
5 mM	0.52 mL	2.60 mL	5.20 mL
10 mM	0.26 mL	1.30 mL	2.60 mL
50 mM	0.05 mL	0.26 mL	0.52 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. Toner AP, McLaughlin F, Giles FJ, Sullivan FJ, O'Connell E, Carleton LA, Breen L, Dunne G, Gorman AM, Lewis JD, Glynn SA. The novel toluidine sulphonamide EL102 shows pre-clinical in vitro and in vivo activity against prostate cancer and circumvents MDR1 resistance. Br J Cancer. 2013 Oct 15;109(8):2131-41. doi: 10.1038/bjc.2013.537. Epub 2013 Sep 19. PMID: 24052043; PMCID: PMC3798953.

In vivo study

1. Toner AP, McLaughlin F, Giles FJ, Sullivan FJ, O'Connell E, Carleton LA, Breen L, Dunne G, Gorman AM, Lewis JD, Glynn SA. The novel toluidine sulphonamide EL102 shows pre-clinical in vitro and in vivo activity against prostate cancer and circumvents MDR1 resistance. Br J Cancer. 2013 Oct 15;109(8):2131-41. doi: 10.1038/bjc.2013.537. Epub 2013 Sep 19. PMID: 24052043; PMCID: PMC3798953.

7. Bioactivity

Biological target:

EL102 is a inhibitor of HIF1α , which can inhibit tubulin polymerisation and decreased microtubule stability.

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In vitro activity

EL102 inhibited cell proliferation with an IC50 of ~21–40 nm.

Reference: Br J Cancer. 2013 Oct 15;109(8):2131-41. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3798953/

In vivo activity

Administration of 12 mg kg^{-1} docetaxel decreased the rate of tumour growth more efficiently than EL102 (slope (R^2): vehicle 0.1414±0.01438 (0.9603) *vs* docetaxel 12 mg kg^{-1} 0.04230±0.002531 (0.9688), *F*-test: $P<0.0001$), while the combination of both drugs had the largest effect on inhibition of tumour growth, suggesting that these drugs work well together in combination *in vivo* (slope (R^2): vehicle 0.1414±0.01438 (0.9603) *vs* docetaxel 12 mg kg^{-1} and EL 102 12 mg kg^{-1} 0.01533±0.0008838 (0.9709), *F*-test: $P<0.0001$ or vehicle, 0.1414±0.01438 (0.9603) *vs* docetaxel 12 mg kg^{-1} and EL 102 15 mg kg^{-1}, 0.01537±0.001704 (0.9003), *F*-test: $P<0.0001$).

Reference: Br J Cancer. 2013 Oct 15;109(8):2131-41. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3798953/