

Product data sheet



MedKoo Cat#: 564278 Name: LLS30 CAS#: 2138367-58-3 Chemical Formula: C ₃₄ H ₃₃ C ₁₄ N ₅ O ₃ Exact Mass: 699.1338 Molecular Weight: 701.47	
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:

LLS30 is an allosteric inhibitor of Galectin-1 (Gal-1). LLS30 decreases Gal-1 binding affinity to its binding partners, and potentially overcomes metastatic castration-resistant prostate cancer (mCRPC).

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	TBD	TBD

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	1.43 mL	7.13 mL	14.26 mL
5 mM	0.29 mL	1.43 mL	2.85 mL
10 mM	0.14 mL	0.71 mL	1.43 mL
50 mM	0.03 mL	0.14 mL	0.29 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. Shih TC, Liu R, Wu CT, Li X, Xiao W, Deng X, Kiss S, Wang T, Chen XJ, Carney R, Kung HJ, Duan Y, Ghosh PM, Lam KS. Targeting Galectin-1 Impairs Castration-Resistant Prostate Cancer Progression and Invasion. Clin Cancer Res. 2018 Sep 1;24(17):4319-4331. doi: 10.1158/1078-0432.CCR-18-0157. Epub 2018 Apr 17. PMID: 29666302; PMCID: PMC6125207.

In vivo study

1. Shih TC, Liu R, Wu CT, Li X, Xiao W, Deng X, Kiss S, Wang T, Chen XJ, Carney R, Kung HJ, Duan Y, Ghosh PM, Lam KS. Targeting Galectin-1 Impairs Castration-Resistant Prostate Cancer Progression and Invasion. Clin Cancer Res. 2018 Sep 1;24(17):4319-4331. doi: 10.1158/1078-0432.CCR-18-0157. Epub 2018 Apr 17. PMID: 29666302; PMCID: PMC6125207.

7. Bioactivity

Biological target:

LLS30 is an allosteric inhibitor of Galectin-1 (Gal-1).

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In vitro activity

It was evaluated whether LLS30 could have an effect on the phosphorylation of Akt. Western blotting of cell lysates collected from CRPC PC3 (AR negative) and 22RV1 (AR positive) cells treated by LLS30 or DMSO showed that LLS30 treatment induced expression of p21, a cyclin-dependent kinase (CDK) inhibitor that interacts with Akt and also regulates survival. Phosphorylated AKT was partially suppressed in PC3 and 22RV1 cells after 24 hr treatment with 10 μ M LLS30. Interestingly, treatment with LLS30 as well as siRNA knockdown of Gal-1, also decreased expression of AR and AR-Variants (AR-Vs) in 22RV1 cells. These results indicated that LLS30 inhibited CRPC cell growth through the suppression of Akt and AR pathway, and induction of p21. Moreover, these effects are most likely mediated through the inhibition of Gal-1 function.

Reference: Clin Cancer Res. 2018 Sep 1;24(17):4319-4331. <https://pubmed.ncbi.nlm.nih.gov/29666302/>

In vivo activity

The invasion-inhibitory activity of LLS30 was measured in vivo. Luciferase-tagged PC3 cells were transplanted into nude mice via tail-vein injection, followed by LLS30 treatment (5mg/kg q.d.X5) two weeks later. In control groups, metastatic colonization was observed in all 6 mice in a period of six weeks after injection. PC3 cells are spread to major visceral organs, such as kidneys, lungs, livers, and spleens. In LLS30 treated group, only 1 mouse developed metastases. These results indicated that LLS30 is capable of inhibiting tumor invasion and metastasis in vivo.

Reference: Clin Cancer Res. 2018 Sep 1;24(17):4319-4331. <https://pubmed.ncbi.nlm.nih.gov/29666302/>

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.