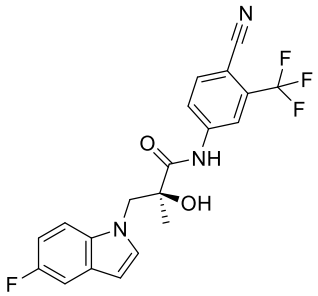
Product data sheet

MedKoo Cat#: 558752 Name: UT-155 CAS#: 2031161-35-8 Chemical Formula: $C_{20}H_{15}F_4N_3O_2$ Exact Mass: 405.11 Molecular Weight: 405.35	
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:
UT-155 is a potent selective androgen receptor degrader (SARD), markedly reducing the activity of wild-type and splice variant isoforms of AR, binding the amino-terminal transcriptional activation domain AF-1 and the carboxy-terminal ligand binding domain.

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	100	246.7

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.47 mL	12.34 mL	24.67 mL
5 mM	0.49 mL	2.47 mL	4.93 mL
10 mM	0.25 mL	1.23 mL	2.47 mL
50 mM	0.05 mL	0.25 mL	0.49 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. Ponnusamy S, Coss CC, Thiyagarajan T, Watts K, Hwang DJ, He Y, Selth LA, McEwan IJ, Duke CB, Pagadala J, Singh G, Wake RW, Ledbetter C, Tilley WD, Moldoveanu T, Dalton JT, Miller DD, Narayanan R. Novel Selective Agents for the Degradation of Androgen Receptor Variants to Treat Castration-Resistant Prostate Cancer. Cancer Res. 2017 Nov 15;77(22):6282-6298. doi: 10.1158/0008-5472.CAN-17-0976. Epub 2017 Oct 4. PMID: 28978635; PMCID: PMC5890913.

In vivo study

1. Ponnusamy S, Coss CC, Thiyagarajan T, Watts K, Hwang DJ, He Y, Selth LA, McEwan IJ, Duke CB, Pagadala J, Singh G, Wake RW, Ledbetter C, Tilley WD, Moldoveanu T, Dalton JT, Miller DD, Narayanan R. Novel Selective Agents for the Degradation of Androgen Receptor Variants to Treat Castration-Resistant Prostate Cancer. Cancer Res. 2017 Nov 15;77(22):6282-6298. doi: 10.1158/0008-5472.CAN-17-0976. Epub 2017 Oct 4. PMID: 28978635; PMCID: PMC5890913.

7. Bioactivity
Biological target:

UT-155 is a selective and potent androgen receptor (AR) antagonist, with a Ki of 267 nM for UT-155 binding to AR-LBD.

In vitro activity

Product data sheet

The effect of UT-155 on the protein level of closely related receptors, PR and estrogen receptor (ER) was tested in T47D breast cancer cells. Although UT-155 blocked PR-dependent transactivation (Figure 1), it had no effect on PR or ER protein levels in T47D cells (Figure 3D). The effect of UT-155 on glucocorticoid receptor (GR) protein levels was tested in PC-3 cells transiently transfected with an expression construct. While UT-155 inhibited the AR protein under similar conditions, it had no effect on GR (Figure S2A). Second, the effect of UT-155 on the fluorescence signal emitted by GFP-AR, GFP, or GFP-ANGPTL4, a protein that has no homology to nuclear receptors, was tested in HeLa cells. Treatment of HeLa cells transfected with the GFP-tagged constructs with 10 μM UT-155 resulted in down-regulation of the GFP signal in GFP-AR-transfected cells, but not in cells expressing GFP or GFP-ANGPTL4 (Figure S2B). Additionally, mass spectrometry was performed in LNCaP cells treated with vehicle or 10 μM UT-155. The results show that UT-155 did not inhibit the expression of the proteins identified, other than the AR. Some of the proteins identified are shown in Figure S2C. Finally, a study to determine the cross-reactivity of UT-155 with a panel of kinases demonstrated no significant inhibition of kinase activity. These results provide strong evidence for the selectivity of UT-155 to the AR.

Reference: Cancer Res. 2017 Nov 15;77(22):6282-6298. https://www.ncbi.nlm.nih.gov/pmc/articles/pmid/28978635/

In vivo activity

To determine the effects in vivo, UT-155 was tested in xenograft models. UT-155 inhibited the growth of the LNCaP tumors with a 65% tumor growth inhibition (TGI) (Figure 7C). Consistent with the inhibition of tumor volume, tumor weights and tumor PSA were also significantly lower by 50–75% in UT-155-treated animals (Figure 7C). UT-155 significantly inhibited the growth of 22RV1 xenograft by 53% (Figure 7D). In the measurement of drug concentration in the tumors to determine the drug exposure, UT-155 was extracted from tumors and was detected by mass spectrometry. UT-155 accumulated in the tumors and the concentration of 562 nM was above its IC50 concentration (Figure S8F). Consistent with the observations made in 22RV1 xenografts, UT-155 inhibited the growth of Pr-3001 by 40–60% over the course of 14 days (Figure 7E).

Reference: Cancer Res. 2017 Nov 15;77(22):6282-6298. https://www.ncbi.nlm.nih.gov/pmc/articles/pmid/28978635/