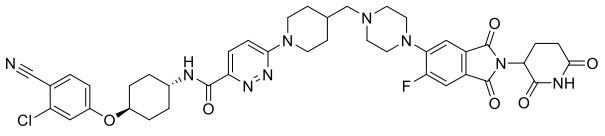
Product data sheet

MedKoo Cat#: 207155 Name: Bavdegalutamide CAS#: 2222112-77-6 Chemical Formula: $C_{41}H_{43}ClFN_9O_6$ Exact Mass: 811.3009 Molecular Weight: 812.3004	
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:

Bavdegalutamide, also known as ARV-110, is a first-in-class PROTAC that effectively targets the wild type Androgen Receptor (AR) and certain genomic alterations of the AR (amplification, T878A, H875Y, F877L, M895V, but not L702H or AR-V7) for degradation in both enzalutamide sensitive and resistant preclinical models. ARV-110 showed promising anti-tumor activity in heavily pretreated men with 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	26.67	32.83

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	1.23 mL	6.16 mL	12.31 mL
5 mM	0.25 mL	1.23 mL	2.46 mL
10 mM	0.12 mL	0.62 mL	1.23 mL
50 mM	0.02 mL	0.12 mL	0.25 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

Taavi Neklesa, et al. ARV-110: An androgen receptor PROTAC degrader for prostate cancer. American Association for Cancer Research. 2018. 78 (13): pp. 5236

In vivo study

Taavi K Neklesa,et al. ARV-110: an oral androgen receptor PROTAC degrader for prostate cancer. GU ASCO 2019

7. Bioactivity

Biological target:

Bavdegalutamide (ARV-110) is a specific androgen receptor (AR) PROTAC degrader that promotes ubiquitination and degradation of AR.

In vitro activity

PROTAC-mediated AR degradation suppresses the expression of the AR-target genes PSA and FKBP5, inhibits AR-dependent cell proliferation, and induces potent apoptosis in VCaP cells. ARV-110 degrades clinically relevant mutant AR proteins and retains activity in a high androgen environment. In mouse xenograft studies, greater than 90% AR degradation is observed at a 1 mg/kg PO

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QD dose. Significant inhibition of tumor growth and AR signaling can be achieved in both an intact and castrate setting. Further, ARV-110 demonstrates in vivo efficacy and reduction of oncogenic Erg protein in a long term, castrate, enzalutamide-resistant VCaP tumor model. DMPK and exploratory toxicology studies show robust oral, dose proportional drug exposure in rodent and non-rodent species.

Reference: Taavi Neklesa, et al. ARV-110: An androgen receptor PROTAC degrader for prostate cancer. American Association for Cancer Research. 2018. 78 (13): pp. 5236

In vivo activity

ARV-110 robustly degrades AR in all cell lines tested, with an observed halfmaximal degradation concentration (DC50) of ~1 nM. ARV-110 treatment leads to highly selective AR degradation, as demonstrated by proteomic studies. In VCaP cells, PROTAC-mediated AR degradation suppresses the expression of the AR-target gene PSA, inhibits AR-dependent cell proliferation, and induces apoptosis at low nanomolar concentrations. Further, ARV-110 degrades clinically relevant mutant AR proteins and retains activity in a high androgen environment. In mouse xenograft studies, greater than 90% AR degradation is observed at a 1 mg/kg PO QD dose. Significant inhibition of tumor growth and AR signaling has been achieved in LNCaP, VCaP and prostate cancer patient derived xenograft (PDX) models. Notably, ARV-110 demonstrates in vivo efficacy and reduction of AR-target gene expression in a long term, castrate, enzalutamide-resistant VCaP tumor model.

Reference: Taavi K Neklesa,et al. ARV-110: an oral androgen receptor PROTAC degrader for prostate cancer. GU ASCO 2019