Product Datasheet

UT-34

Catalog No. **BP-01981** · CAS **2168525-92-4** · Form **free base** · Physical state **solid** · Color **White to off-white** · Version **1.0** · Revision **2026-09-09**

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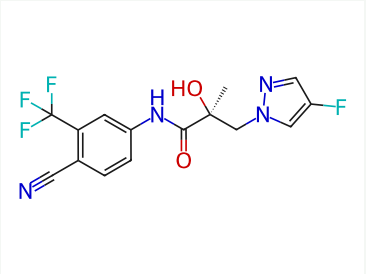
Target	Research area
Estrogen Receptor/ERR	**Endocrinology; Cancer**

Molecular formula	$C_{15}H_{12}F_4N_4O_2$
Molecular weight	**356.2750**

STRUCTURE



DESCRIPTION

UT-34 is a potent, selective and orally active second-generation pan-androgen receptor (AR) antagonist and degrader with IC50s of 211.7 nM, 262.4 nM and 215.7 nM for wild-type, F876L and W741L AR, respectively. UT-34 binds to ligand-binding domain (LBD) and function-1 (AF-1) domains and requires ubiquitin proteasome pathway to degrade the AR. UT-34 has anti-prostate cancer efficacy.

BIOLOGICAL ACTIVITY

In Vitro

UT-34 (3-10 μM; 24 hours; LNCaP cells) treatment inhibits the expression of PSA and FKBP5 and growth of LNCaP cells starting from 100 nM with maximum effect observed at 10 μM.

UT-34 (0.1-10 μM; 24 hours; LNCaP cells) treatment results in a reduction of AR levels at 1000 nM in LNCaP cells.

Treatment of ZR-75-1 cells maintained in serum-containing growth medium with UT-34 results in downregulation of AR protein levels, but not estrogen receptor (ER) or
progesterone receptor (PR) levels. Furthermore, in MDA-MB-453 breast cancer cells that express AR and glucocorticoid receptor (GR), UT-34 induces the downregulation of AR, but not GR.

UT-34 is an effective degrader of both AR and AR-V7. LNCaP-ARV7 cells are treated for 24 hours in the presence of 0.1 nM R1881 or 10 ng/mL Doxycycline. Doxycycline induces the expression of EDN2, which is inhibited by UT-34, while UT-34 inhibits the expression of R1881-induced FKBP5 gene expression.

In Vivo

UT-34 (20-40 mg/kg; oral administration; daily; for 14 days; NSG mice) at 20 and 40 mg/kg reduces the seminal vesicle weight by 10%-20% and 50%-60 %, respectively.

UT-34 inhibits androgen-dependent tissues such as prostate and seminal vesicles in rats, and the growth of Enzalutamide-resistant castration-resistant prostate cancer (CRPC) xenografts. UT-34 also induces tumor regression in intact immunocompromised rats.

SOLUBILITY

Soluble in DMSO

REFERENCES

[1]. Ponnusamy S, et al. Orally Bioavailable Androgen Receptor Degrader, Potential Next-Generation Therapeutic for Enzalutamide-Resistant Prostate Cancer. Clin Cancer Res. 2019 Nov 15;25(22):6764-6780.

[2]. Stone L. UT-34: a promising new AR degrader. Nat Rev Urol. 2019 Nov;16(11):640.

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