Product Datasheet

AB521

Catalog No. **BP-00909** · CAS **2709069-30-5** · Form **free base** · Physical state **solid** · Color **white to off-white** · Version **1.0** · Revision **2026-09-11**

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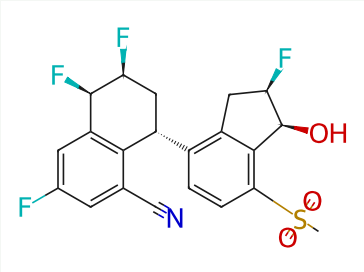
Target	Research area
HIF/HIF Prolyl-Hydroxylase; VEGFR	**Cancer**

Molecular formula	$C_{21}H_{17}F_4NO_3S$
Molecular weight	**439.4230**

STRUCTURE



DESCRIPTION

Casdatifan (AB521) is an orally active HIF-2α (hypoxia-inducible factor 2α) inhibitor. Casdatifan demonstrated significant antitumor activity and favorable pharmacokinetics in ccRCC (clear cell renal cell carcinoma) models.

BIOLOGICAL ACTIVITY

In Vitro

Casdatifan (2-10 μM; 24 h) reduces HIF-2α protein levels in 786-O and A-498 clear cell renal cell carcinoma (ccRCC) cells under normoxic conditions.

Casdatifan potently inhibits VEGF secretion in 786-O ccRCC cells, with an IC50 of 28.9 nM.

Casdatifan (0.001-10 μM; 21 days) inhibits the anchorage-independent growth of 786-O ccRCC cells in a concentration-dependent manner.

Casdatifan (1 μM; 20 h) inhibits HIF-2α-dependent gene transcription in hypoxically induced primary human M2-polarized macrophages.

Casdatifan (3 days) reduces HIF-2α protein levels in activated hypoxic primary human CD8+ T cells without impairing T cell proliferation or cytokine secretion.

In Vivo

Casdatifan (3-100 mg/kg; p.o.; once daily; until study endpoint) dose-dependently inhibits HIF-2α-mediated transcription and significantly suppresses tumor growth in nude mice bearing 786-O and A-498 xenograft models.

Casdatifan (30 mg/kg; p.o.; once daily; until study endpoint) significantly enhances the antitumor efficacy in the NSG-MHC I/II DKO humanized PBMC A-498 ccRCC xenograft model when administered in combination with Zimberelimab.

SOLUBILITY

Soluble in DMSO, >100mg/mL

REFERENCES

[1]. Schweickert PG, et al. Casdatifan (AB521) is a novel and potent allosteric small molecule inhibitor of protumourigenic HIF-2α dependent transcription. Br J Pharmacol. 2025;182(17):4147-4167.

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