Mitazalimab

Cat. No.: HY-P99742

CAS No.: 2055640-86-1

Target: TNF Receptor

Pathway: Apoptosis

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description	Mitazalimab (ADC-1013; JNJ-64457107) is FcγR-dependent CD40 agonist with tumor-directed activity. Mitazalimab activates antigen-presenting cells, e.g. dendritic cells (DC), to initiate tumor-reactive T cells. Therefore, Mitazalimab induces tumor-specific T cells to infiltrate and kill tumors. Mitazalimab remodels the tumor-infiltrating myeloid microenvironment[1][2].
IC_{50} & Target	CD40
In Vitro	Mitazalimab (1 ng/mL-10 μg/mL) activates tumor associated macrophages (TAMs) in prostate tumor or ovarian tumor samples from human[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Mitazalimab (100 μg/mouse; i.p.; single dose) activates splenic DC and B cells in Naïve hCD40tg mice, and also results expansion of OVA-specifc CD8+ T cells in OVA-rechallenged (200 μg; i.v.; 3 times for 7 days between) mice[1]. Mitazalimab (100 and 300 μg/mouse, i.p.; on day 7, 10 and 13 post-inoculation) induces the release of proinfammatory cytokines and chemokines in the blood in MB49 (mouse bladder tumor cell line) bearing mice, and alters the composition of tumor myeloid cells, such that reduces monocytes and macrophages in favor of granulocytic cell[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	MB49-tumor bearing mice model[1]
Dosage:	10, 30, 100 or 300 μg/mouse
Administration:	Intraperitoneal injection; on day 7, 10 and 13 post-inoculation; sampled at 24 h after final dose
Result:	Increased the level of IP-10, MIP-1α and TNF-α, but not CXCL1, IFN-γ, IL-6, IL-10, MCP-1 and MIP-2. Resulted in increased frequency of CD44hi CD62L-efector memory $CD8^+$ and $CD4^+$ T cells.

REFERENCES

[1]. Deronic A, et al. The human anti-CD40 agonist antibody mitazalimab (ADC-1013; JNJ-64457107) activates antigen-presenting cells, improves expansion of antigen-specific T cells, and enhances anti-tumor efficacy of a model cancer vaccine in vivo. Cancer Immunol Immunother. 2021 Dec;70(12):3629-3642.

[2]. Smith K E, et al. Mitazalimab, a potent CD40 agonist in combination with chemotherapy redirects and activates tumor infiltrating myeloid cells[J]. Cancer Research, 2022, 82(12_Supplement): 4155-4155.

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