Anifrolumab

Cat. No.:	HY-P99168
CAS No.:	1326232-46-5
Target:	Others
Pathway:	Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description

Anifrolumab is a type I interferon (IFN) receptor antagonist, a human monoclonal antibody. Anifrolumab blocks the activity of type I interferon. Anifrolumab can be used in systemic lupus erythematosus (SLE) research[1][2].

In Vitro

Anifrolumab (67.7 nM; 20 min) induces sustained reduction of surface IFNAR1 and abrogates STAT1 phosphorylation[2].
Anifrolumab (1 and 10 μg/mL; 6 or 7 d) suppresses differentiation of B cells into plasma cells[2].
Anifrolumab inhibits type I IFN-induced ISRE signaling, with IC_{50}s ranging from 0.004 to 0.3 nM for the IFN-α subtypes, and 0.03 nM and 0.07 nM for IFN-β and IFN-ω, respectively[2].
Anifrolumab (67.7 nM) dose-dependently inhibits IFN-α production from pDCs in response to CpG-A or DNA-IC stimulation, inhibiting 87-95% of IFN-α production[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Western Blot Analysis[2]

Cell Line:	Peripheral blood mononuclear cells (PBMCs)
Concentration:	67.7 nM
Incubation Time:	20 min
Result:	Abrogated IFN-α2-dependent and pDC supernatant-dependent STAT1 phosphorylation.

Cell Differentiation Assay[2]

Cell Line:	Plasmacytoid dendritic cell (pDC)
Concentration:	1 and 10 μg/mL
Incubation Time:	6 or 7 days
Result:	Inhibited pDC-mediated plasma cell differentiation in a dose-dependent manner, with a mean 76% reduction in plasma cell number relative to control antibody.

REFERENCES

[1]. Furie R, et al. Anifrolumab, an Anti-Interferon-α Receptor Monoclonal Antibody, in Moderate-to-Severe Systemic Lupus Erythematosus. Arthritis Rheumatol. 2017 Feb;69(2):376-386.

[2]. Riggs JM, et al. Characterisation of anifrolumab, a fully human anti-interferon receptor antagonist antibody for the treatment of systemic lupus erythematosus. Lupus Sci Med. 2018 Apr 5;5(1):e000261.

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