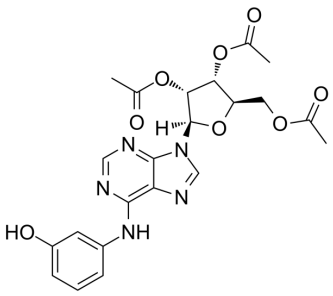
IMM-H007

Cat. No.:	HY-141645
CAS No.:	1221412-23-2
Molecular Formula:	$C_{22}H_{23}N_5O_8$
Molecular Weight:	485.45
Target:	AMPK; TGF-β Receptor; NF-κB; JNK; AP-1
Pathway:	Epigenetics; PI3K/Akt/mTOR; TGF-beta/Smad; NF-κB; MAPK/ERK Pathway; Immunology/Inflammation
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	IMM-H007 (WS070117) is an orally active and potent AMPK (AMP-activated protein kinase) activator and TGFβ1 (transforming growth factor β1) antagonist. IMM-H007 has protective effects in cardiovascular diseases via activation of AMPK. IMM-H007 negatively regulates endothelium inflammation through inactivating NF-κB and JNK/AP1 signaling. IMM-H007 inhibits ABCA1 degradation. IMM-H007 resolves hepatic steatosis in HFD-fed hamsters by the regulation of lipid metabolism. IMM-H007 can be used for the research of nonalcoholic fatty liver disease (NAFLD) and inflammatory atherosclerosis[1][2][3].
In Vivo	IMM-H007 inhibits fatty acid import into hepatocytes and liver lipogenesis, and concomitantly stimulates fatty acid oxidation, autophagy, and export of hepatic lipids[2]. IMM-H007 (200 mg/kg, Orally, once per day for 10 days) inhibits ISO-induced cardiac fibrosis and diastolic dysfunction independently of AMPKα2 expression, reduces ISO-induced Smad2/3 phosphorylation downstream of TGFβ1 and cardiac fibrosis via an AMPKα2-independent pathway, but the inhibition of TGFβ1 expression is AMPKα2-dependent[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Yu J, et al. IMM-H007, a novel small molecule inhibitor for atherosclerosis, represses endothelium inflammation by regulating the activity of NF-κB and JNK/AP1 signaling. Toxicol Appl Pharmacol. 2019 Oct 15;381:114732.

[2]. Shi H, et al. IMM-H007, a new therapeutic candidate for nonalcoholic fatty liver disease, improves hepatic steatosis in hamsters fed a high-fat diet. FEBS Open Bio. 2017 Aug 29;7(9):1379-1391.

[3]. Wang SX, et al. IMM-H007 attenuates isoprenaline-induced cardiac fibrosis through targeting TGFβ1 signaling pathway. Acta Pharmacol Sin. 2022 Mar 30.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA