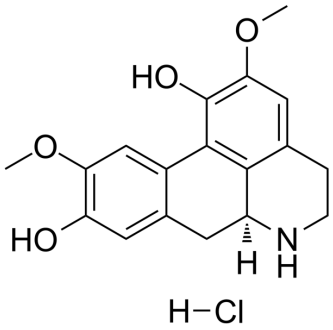
Norisoboldine hydrochloride

Cat. No.:	HY-N0586A
CAS No.:	5083-84-1
Molecular Formula:	$C_{18}H_{20}ClNO_4$
Molecular Weight:	349.81
Target:	Adenosine Receptor
Pathway:	GPCR/G Protein
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Norisoboldine hydrochloride is an orally active natural aryl hydrocarbon receptor (AhR) agonist. Norisoboldine hydrochloride, as a major isoquinoline alkaloid present in Radix Linderae, can be used for the research of Rheumatoid arthritis and Ulcerative colitis[1][2].
IC_{50} & Target	AhR[2]

In Vitro

Norisoboldine hydrochloride (1~30 μM; 0~24 hours; CD4+T cells) activates AhR under hypoxic microenvironment and significantly downregulates mRNA expression of miR-31[2].
Norisoboldine hydrochloride (30 μM; 0~24 hours; CD4+T cells) inhibits glycolysis in hypoxia[2].
Norisoboldine hydrochloride (1~30 μM; 0~72 hours; Treg cells) promotes Treg differentiation in hypoxia[2].
Norisoboldine hydrochloride (10, 30 μM) facilitates the disassociation of HSP90/AhR complexes, the nuclear translocation of AhR, and the formation of AhR/ARNT complexes. Norisoboldine hydrochloride induces generation of Treg cells in hypoxia[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Western Blot Analysis[2]

Cell Line:	CD4+T cells
Concentration:	1~30 μM
Incubation Time:	24 hours
Result:	Activated AhR in cells under hypoxic microenvironment.

RT-PCR[2]

Cell Line:	CD4+T cells
Concentration:	1~30 μM
Incubation Time:	24 hours
Result:	Significantly downregulated mRNA expression of miR-31.

Immunofluorescence[2]

Cell Line:	CD4+T cells
Concentration:	30 μM
Incubation Time:	24 hours
Result:	Inhibited glycolysis in hypoxia.

Immunofluorescence[2]

Cell Line:	Treg cells
Concentration:	1~30 μM
Incubation Time:	72 hours
Result:	Promoted Treg differentiation in hypoxia.

In Vivo

Norisoboldine hydrochloride (10~40 mg/kg; p.o.; 20 days) significantly reduces the severity of joint swelling and erythema during the course of the experiment[1].

Norisoboldine hydrochloride (40 mg/kg; i.g.; 10 days) induces enhancement of CYP1A1 expression and suppresses expressions of Glut1 and HK2 in colons[2].

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

Animal Model:	Male ICR mice (18–22 g)
Dosage:	10~40 mg/kg
Administration:	P.o.
Result:	Significantly reduced the severity of joint swelling and erythema during the course of the experiment.

Animal Model:	Female C57BL/6 mice (18–22 g)
Dosage:	40 mg/kg
Administration:	I.g.
Result:	Induced enhancement of CYP1A1 expression and suppressed expressions of Glut1 and HK2 in colons.

REFERENCES

[1]. Luo Y, et al. Therapeutic effect of norisoboldine, an alkaloid isolated from Radix Linderae, on collagen-induced arthritis in mice. Phytomedicine. 2010;17(10):726-731.

[2]. Lv Q, et al. Norisoboldine, a natural AhR agonist, promotes Treg differentiation and attenuates colitis via targeting glycolysis and subsequent NAD+/SIRT1/SUV39H1/H3K9me3 signaling pathway. Cell Death Dis. 2018;9(3):258. Published 2018 Feb 15.

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

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