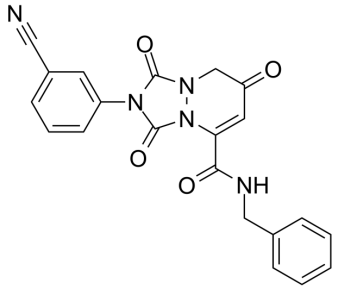
PNRI-299

Cat. No.:	HY-15131
CAS No.:	550368-41-7
Molecular Formula:	$C_{21}H_{15}N_5O_4$
Molecular Weight:	401.37
Target:	Interleukin Related
Pathway:	Immunology/Inflammation
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	PNRI-299 is a selective AP-1 transcription inhibitor with an IC_{50} of 20 uM. PNRI-299 is a selective APE/Ref-1 inhibitor. PNRI-299 has no effect on NF-κB transcription or thioredoxin (up to 200 uM). PNRI-299 significantly reduces airway eosinophil infiltration, mucus hypersecretion, edema, and IL-4 levels in a mouse asthma model[1][2][3].
In Vitro	PNRI-299 specifically reacts with Ref-1, inhibits AP-1 transcription, and overexpression of the molecular target. Ref-1 attenuates PNRI-299 inhibition of AP-1 transcription. PNRI-299 interacts with the redox nucleophile Cys-65, to aid in the interpretation of structure activity relationships (SARs)[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	PNRI-299 (intranasal; 0.75 or 2.0 mg/kg; 30 min before OVA on days 25-27) reduces the airway inflammatory cell infiltration (arrows) and mucus release in ovalbumin (OVA)-treated (i.p.; 100 μg) female BALB/c mice aged 6-8 wk)[1]. PNRI-299 (3, 10 mg/kg; iv; 5 min before reperfusion) has no significant effect on the translocation of NF-κB in male C57/BL6 mice (8-10 weeks). PNRI-299 has little effect on the inflammatory response that follows intestinal I/R injury[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Cell Commun Signal. 2020 May 4;18(1):70.

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REFERENCES

[1]. Nguyen C, et al. Chemogenomic identification of Ref-1/AP-1 as a therapeutic target for asthma. Proc Natl Acad Sci U S A. 2003 Feb 4;100(3):1169-73.

[2]. Souza DG, et al. NF-kappaB plays a major role during the systemic and local acute inflammatory response following intestinal reperfusion injury. Br J Pharmacol. 2005 May;145(2):246-54.

[3]. Sun Yang, et al. Apurinic/apyrimidinic endonuclease/redox effector factor-1(APE/Ref-1): a unique target for the prevention and treatment of human melanoma. Antioxid Redox Signal. 2009 Mar;11(3):639-50.

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

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