# iNOs-IN-3

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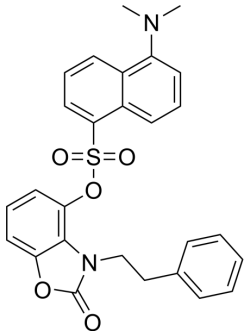
| **Cat. No.:** | HY-150055 |
| **CAS No.:** | 2241674-94-0 |
| **Molecular Formula:** | $C_{27}H_{24}N_2O_5S$ |
| **Molecular Weight:** | 488.55 |
| **Target:** | NO Synthase |
| **Pathway:** | Immunology/Inflammation |
| **Storage:** | Please store the product under the recommended conditions in the Certificate of Analysis. |



## BIOLOGICAL ACTIVITY

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| **Description** | iNOs-IN-3 (Compound 2d) is an orally active nitric oxide synthase (iNOS) inhibitor ($IC_{50}$=3.342 μM). iNOs-IN-3 shows anti-inflammatory activity and can be used in LPS-induced acute lung injury (ALI) research[1]. |
| **$IC_{50}$ & Target** | IC50: 3.342 μM (iNOS)[1] |

**In Vitro**

iNOs-IN-3 (25 μM; 24 h) inhibits LPS-induced RAW 264.7 cells[1].
iNOs-IN-3 (12.5 μM; 24 h) can decrease the expression of iNOS[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

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|---|---|
| Cell Line: | RAW 264.7 microphages |
| Concentration: | 25 μM |
| Incubation Time: | 24 hours |
| Result: | Showed higher inhibitory activity ($IC_{50}$=14.72 μM) in LPS-induced RAW 264.7 cells. |

Cell Viability Assay[1]

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|---|---|
| Cell Line: | RAW 264.7 microphages |
| Concentration: | 12.5 μM |
| Incubation Time: | 24 hours |
| Result: | Inhibited the LPS-induced mRNA expression of iNOS obviously. |

Cell Viability Assay[1]

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|---|---|
| Cell Line: | RAW 264.7 microphages |
| Concentration: | 12.5 μM |
| Incubation Time: | 24 hours |

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| Result: | Inhibited the expression of TNF-α, IL-6, and IL-1β at 12.5 μM. |

**In Vivo**

iNOs-IN-3 (oral administration; 12.5 mg/kg; once) treatment shows anti-inflammatory activity against xylene-induced ear edema in mice[1].

iNOs-IN-3 (oral administration; 3.125 mg/kg, 6.25 mg/kg, 12.5 mg/kg; once) protects against LPS-induced acute lung injury[1].

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

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|---|---|
| Animal Model: | Xylene-induced mice[1] |
| Dosage: | 12.5 mg/kg |
| Administration: | Oral administration; 12.5 mg/kg; once |
| Result: | Showed better activity than the positive control. |

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|---|---|
| Animal Model: | LPS-induced acute lung injury (ALI) mice[1] |
| Dosage: | 3.125 mg/kg, 6.25 mg/kg, 12.5 mg/kg |
| Administration: | Oral administration; 3.125 mg/kg, 6.25 mg/kg, 12.5 mg/kg; once |
| Result: | Attenuated the pathological lesions dose-dependently, such as decreased inflammatory infiltration and pulmonary congestion. Inhibited LPS-induced lung edema dose-dependently. |

## REFERENCES

[1]. Li Tang, et al. Design and synthesis of new disubstituted benzoxazolone derivatives that act as iNOS inhibitors with potent anti-inflammatory activity against LPS-induced acute lung injury (ALI). Bioorg Med Chem. 2020 Nov 1;28(21):115733.



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