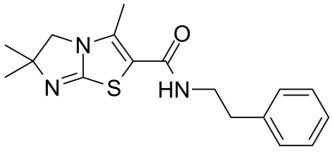
TOK-8801

Cat. No.:	HY-100162
CAS No.:	105963-46-0
Molecular Formula:	$C_{17}H_{21}N_3OS$
Molecular Weight:	315.43
Target:	Others
Pathway:	Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	TOK-8801 is a synthesized dihydroimidazothiazole carboxamide and is under development as an immunomodulator.
In Vitro	TOK-8801 is a synthesized dihydroimidazothiazole carboxamide and is under development as an immunomodulator. TOK-8801 augments the in vitro anti-SRBC PFC response of murine splenocytes in a bell-shaped manner. The stimulatory effect of TOK-8801 is observed at concentrations of 2.5×10^{-7} to 2.5×10^{-5} M and is diminished at 10^{-4} M. The cell-viability is not altered during the culture with TOK-8801 at any doses used in this experiment (10^{-7} to 10^{-4} M). TOK-8801 enhances the ^{3}H-TdR uptake of these responses in a bell-shaped manner, and effective concentrations of TOK-8801 are 10^{-7} to 10^{-5} M[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	The anti-SRBC PFC response per spleen, which is prominently lowered by restraint-stress ($P<0.05$), is significantly restored by the administration of TOK-8801 (0.5 mg/kg, $P<0.05$). The number of total splenic lymphocytes in restraint-stress is decreased, but there are no significant changes in the number of total splenic lymphocytes by the treatment with TOK-8801 [1]. When TOK-8801 is administered orally at doses of 0.1 to 10 mg/kg, the number of plaque forming cell (PFC) significantly decreases or tends to decrease. Treatment of TOK-8801 at doses of 0.1 to 1 mg/kg causes significant suppression in the delayed-type hypersensitivity (DTH) reaction induced in high responder[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Cell Assay [1]	Spleen cells (2×10^5) or thymus cells (2×10^5) from BALB/c mice are cultured with Con A (1 or 5 μg/mL) or LPS (10 μg/mL) in 0.2 mL of RPMI-1640 medium containing 5% FCS using round-bottomed microculture plates with 96 wells for 2 days and are pulsed with 0.5 μCi of ^{3}H-TdR for an additional 18 hr. Then, cells are harvested on glass fiber fillters, and ^{3}H-TdR incorporation is measured in a liquid scintillation counter. TOK-8801 is added at the initiation of the culture[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
Animal Administration [1]	Male BDFI mice are used in this study. Control mice are maintained without food or water while counterparts are under the condition of restraint-stress. On the next day, the mice are immunized with 5×10^8 SRBC intraperitoneally. Immediately, 24 hr and 48 hr after the immunization, TOK-8801 is orally given at doses of 0.02, 0.1 and 0.5 mg/kg/day. All administrations are done after a starvation for 6 hr. Four days after the immunization, splenic anti SRBC PFC are assayed[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Fujiwara M, et al. Immunomodulatory activity of the newly synthesized compound TOK-8801 (N-(2-phenylethyl)-3,6,6-trimethyl-5,6-dihydroimidazo[2,1-b]thiazole-2-carboxamide). Jpn J Pharmacol. 1989 Dec;51(4):549-54.

[2]. Shibata K, et al. Immunomodulatory effect of a newly synthesized compound, TOK-8801 (N-(2-phenylethyl)-3,6,6-trimethyl-5,6-dihydroimidazo [2,1-b]thiazole-2-carboxamide) on antibody production in vivo and delayed-type hypersensitivity in mice. Int J Immunopharmacol. 1990;12(5):497-502.

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