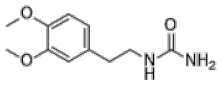
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Data Sheet

Global Supplier of Chemical Probes, Inhibitors & Agonists.

Product Name	:	DPEU
Cat. No.	:	PC-28536
CAS No.	:	25017-47-4
Molecular Formula	:	$C_{11}H_{16}N_2O_3$
Molecular Weight	:	224.26
Target	:	VDAC
Solubility	:	10 mM in DMSO



Biological Activity

DPEU (NPD976-1) is a potent insulin secretagogue and **voltage-dependent anion channels** (**VDACs**) modulator, is an enhancer of glucose-stimulated insulin secretion (GSIS), selectively enhances insulin secretion under high glucose conditions in INS-1 832/13 cells.
DPEU specifically binds to VDAC1 and VDAC2 in mouse islets, interacts with the N-terminal region of VDAC1, binds β-barrel region adjacent to the N terminus of VDAC2.
DPEU modulates mitochondrial ATP release via VDACs to enhance insulin secretion.
DPEU the primary functional moiety responsible for the insulinotropic effects of NPD976.
DPEU enhances GSIS in both mouse and human islets while preserving the total insulin content.
DPEU also augmentes GSIS in the human β-cell line, EndoC-βH1.
DPEU does not alter somatostatin release at 2.5 μM but significantly increased somatostatin secretion at 100 μM under high glucose conditions.
DPEU (4.5 mg/kg) significantly improved glycemic control in both male and female mice, DPEU (100 mg/kg) did not produce the anticipated glucose-lowering effect.

References

Matsunaga K, et al. ***Cell Chem Biol***. 2026 Oct 20:S2451-9456(26)00368-5.

Caution: Product has not been fully validated for medical applications. Lab Use Only!

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