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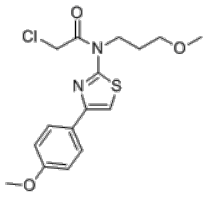
Data Sheet

Global Supplier of Chemical Probes, Inhibitors & Agonists.

Product Name	:	JT010
Cat. No.	:	PC-49684
CAS No.	:	917562-33-5
Molecular Formula	:	$C_{16}H_{19}ClN_2O_3S$
Molecular Weight	:	354.85
Target	:	TRP Channel
Solubility	:	10 mM in DMSO



Biological Activity

JT010 (JT-010) is a potent, site-selective and covalent **TRPA1** agonist, opens the TRPA1 channel by covalently and site-selectively binding to Cys621 with EC50 of 0.65 nM.
JT010 is highly selective for TRPA1 over TRPV1, TRPV3, TRPV4, TRPM2, TRPM8, and TRPC5 (EC50 values >1 uM).
JT010 (10 nM) failed to stimulate calcium influx in the C621S mutant cells but induced calcium influx in the wild type cells.
JT010 could induce TRPA1-specific pain model. increased the intracellular calcium concentration and extracellular signal-regulated kinase 1/2 phosphorylation, and up-regulated alkaline phosphatase mRNA in human dental pulp cells.
Topical treatment of TRPA1 specific agonist JT010 increased UVB-induced skin pigmentation in guinea pigs.

References

Takaya J, et al. ***J Am Chem Soc***. 2015 Dec 23;137(50):15859-64.

Heber S, et al. ***J Neurosci***. 2019 May 15;39(20):3845-3855.

Tazawa K, et al. ***Am J Pathol.*** 2020 Dec;190(12):2417-2426.

Wu W, et al. ***Exp Dermatol***. 2022 Oct 27. doi: 10.1111/exd.14693.

E-mail: tech@probechem.com