

Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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PRODUCT INFORMATION



Yoda1

Item No. 21904

CAS Registry No.: 448947-81-7

Formal Name: 2-[5-[[(2,6-dichlorophenyl)methyl]

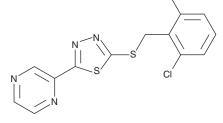
thio]-1,3,4-thiadiazol-2-yl]-pyrazine

MF: $C_{13}H_8CI_2N_4S_2$

FW: 355.3 **Purity:** ≥98% λ_{max} : 314 nm A crystalline solid UV/Vis.: Supplied as:

-20°C Storage: Stability: ≥2 years

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.



Laboratory Procedures

Yoda1 is supplied as a crystalline solid. A stock solution may be made by dissolving the yoda1 in the solvent of choice. Yoda1 is soluble in organic solvents such as DMSO and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of yoda1 in these solvents is approximately 2.5 and 5 mg/ml, respectively.

Yoda1 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, yoda1 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Yoda1 has a solubility of approximately 0.3 mg/ml in a 1:2 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Yoda1 is a Piezo1 ion channel agonist (EC $_{50}$ s = 17.1 and 26.6 μM for murine and human Piezo1transfected HEK293T cells, respectively). It is selective for Piezo1 as it elicits Ca2+ flux in Piezo1- but not Piezo2-transfected HEK293T cells. Yoda1 slows the inactivation phase of murine Piezo1 transient currents and sensitizes them to activation by mechanical pressure, reducing the half maximal activation pressure by 15 mm Hg in an artificial droplet lipid bilayer. Treatment of wild-type red blood cells, but not Piezo1 knockout cells, with 15 μM yoda1 leads to dehydration and a change in cell shape resulting in progression from discocytes to echinocytes to spherocytes.²

References

- 1. Syeda, R., Xu, J., Dubin, A.E., et al. Chemical activation of the mechanotransduction channel Piezo1. Elife 4, e07369 (2015).
- 2. Cahalan, S.M., Lukacs, V., Ranade, S.S., et al. Piezo1 links mechanical forces to red blood cell volume. Elife 4, e07370 (2015).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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