

Hello Bio, Inc.  
304 Wall St., Princeton, NJ 08540 USA

T. 609-683-7500  
F. 609-228-4994

customercare-usa@hellobio.com



## DATASHEET

Yoda2 (KC289)

### Product overview

<b>Name</b>	Yoda2 (KC289)
<b>Cat No</b>	HB9134
<b>Alternative names</b>	Yoda 2, Yoda-2
<b>Biological action</b>	Activator
<b>Purity</b>	>98%
<b>Description</b>	Novel, selective Piezo1 channel activator. Improved efficacy, potency and solubility compared to Yoda1.

### Biological Data

<b>Biological description</b>	Novel, selective Piezo1 channel activator which shows improved (or equivalent) reliability, efficacy and potency in functional assays compared to <b>Yoda1</b> (EC <sub>50</sub> values are 150nM and 600nM at mouse Piezo1 in calcium assays for Yoda2 (KC289) and Yoda1 respectively). Selective for Piezo1 over other membrane proteins and suggested to have greater effect and potency at mouse Piezo1 compared to human Piezo1. Also shows improved aqueous solubility more suited to physiological conditions than those of Yoda1 (~160x more soluble in aqueous buffer than Yoda1). Active in vivo and shows vasorelaxant effects consistent with Piezo1 agonism. Recently shown to help promote cortical bone parameters in mice.
-------------------------------	--

### Solubility & Handling

<b>Storage instructions</b>	Room temperature
<b>Solubility overview</b>	Soluble in DMSO (50 mM with warming)
<b>Handling</b>	When <b>Parsonage et al</b> used Yoda2 (KC289) in universal aqueous buffer, a final DMSO concentration of 0.5% was used to maintain solubility of the compound.

**Meslier et al** prepared working solutions in 0.9% (w/v) Sodium Chloride, 5% DMSO, and 10% (w/v) cyclodextrin SBE-B-CD, to facilitate solubilization of the compound.

<b>Important</b>	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.
------------------	---

### Chemical Data

<b>Chemical name</b>	4-(5-[[[(2,6-dichlorophenyl)methyl]sulfanyl]-1,3,4-thiadiazol-2-yl]benzoic acid potassium salt
<b>Molecular Weight</b>	435.39
<b>Chemical structure</b>	The chemical structure of Yoda2 (KC289) is shown, featuring a 2,6-dichlorophenyl group connected via a methylene bridge to a 1,3,4-thiadiazole ring, which is further connected to a 5-substituted benzoic acid moiety. The potassium salt is indicated.
<b>Molecular Formula</b>	C <sub>16</sub> H <sub>9</sub> Cl <sub>2</sub> KN <sub>2</sub> O <sub>2</sub> S <sub>2</sub>
<b>CAS Number</b>	3081450-95-2
<b>SMILES</b>	O=C(O[K])c1ccc(cc1)c1nnc(SCc2c(Cl)cccc2Cl)s1
<b>Source</b>	Synthetic
<b>InChi</b>	InChI=1S/C16H10Cl2N2O2S2.K/c17-12-2-1-3-13(18)11(12)8-23-16-20-19-14(24-16)9-4-6-10(7-5-9)15(21)22;/h1-7H,8H2,(H,21,22);/q;+1/p-1

InChiKey  
Appearance

OQEIWUHZUPFUQU-UHFFFAOYSA-M  
Beige solid

---

## References

### Improved PIEZO1 agonism through 4-benzoic acid modification of Yoda1.

Parsonage G et al (2023) British journal of pharmacology 180

**PubMedID** [36457143](#)

### Independent endothelial functions of PIEZO1 and TRPV4 in hepatic portal vein and predominance of PIEZO1 in mechanical and osmotic stress.

Endesh N et al (2023) Liver international : official journal of the International Association for the Study of the Liver 43

**PubMedID** [37349903](#)

---