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# DATASHEET

Yoda2 (KC289)

#### **Product overview**

Name Yoda2 (KC289) Cat No HB9134 **Biological action** Activator

Novel, selective Piezo1 channel activator. Improved efficacy, potency and solubility compared to Description

Yoda1.

## **Biological Data**

**Biological description** 

Novel, selective Piezo1 channel activator which shows improved (or equivalent) reliability, efficacy and potency in functional assays compared to Yoda1 (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.

### Solubility & Handling

Storage instructions Solubility overview

**Important** 

Room temperature

Soluble in DMSO (100 mM)

This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not

for human or veterinary use.

#### **Chemical Data**

Chemical name Molecular Weight Chemical structure 4-(5-{[(2,6-dichlorophenyl)methyl]sulfanyl}-1,3,4-thiadiazol-2-yl)benzoic acid potassium salt

435.39

Molecular Formula

C<sub>16</sub>H<sub>9</sub>Cl<sub>2</sub>KN<sub>2</sub>O<sub>2</sub>S<sub>2</sub> **SMILES** O=C(O[K])c1ccc(cc1)c1nnc(SCc2c(CI)cccc2CI)s1

Source Synthetic

InChi 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 OQEIWUHZUPFUQU-UHFFFAOYSA-M

InChiKey

**Appearance** 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