

ML402

Catalog No: tcsc7802

 \checkmark Available Sizes

 Size: 1mg

 Size: 5mg

 Size: 10mg

 Size: 50mg

 Size: 100mg

 \checkmark Specifications

 CAS No: 298684-44-3

 Formula: $c_{14}H_{14}CINO_2S$

Pathway: Membrane Transporter/Ion Channel

Target: Potassium Channel

Purity / Grade:

>98%

Solubility:

DMSO : 150 mg/mL (507.13 mM; Need ultrasonic and warming)

Observed Molecular Weight:

295.78

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Product Description

ML402 is a selective **TREK-1** activator.

IC50 & Target: TREK-1^[1]

In Vitro: Xenopus oocyte two-electrode voltage-clamp measurements show that ML335 and ML402 activate $K_{2P}^{2.1}$ and $K_{2P}^{10.1}$ but not $K_{2P}^{4.1(14.3\pm2.7 \mu M, K_{2P}^{2.1-ML335}; 13.7\pm7.0 \mu M, K_{2P}^{2.1-ML402}; 5.2\pm0.5 \mu M, K_{2P}^{10.1-ML335}; and 5.9\pm1.6 \mu M, K_{2P}^{10.1-ML335}$ ML402). The K_{2P}^{2} modulator pocket has a single difference among TREK subfamily members at the cation- π interaction position, $K_{2P}^{2.1}$ Lys271, which is also a lysine in $K_{2P}^{10.1}$ but a glutamine in $K_{2P}^{4.1}$.

Swapping the Lys271 equivalent between K_{2P}^2 .1 and K_{2P}^4 .1 results in a clear phenotype reversal for ML335 and M402 activation. K $_{2P}^2$.1 (K271Q) is insensitive to ML335 and ML402, whereas K_{2P}^4 .1 (Q258K) responds to both with a similar EC₅₀ to K_{2P}^2 .1 (14.3±2.7 μ M, K_{2P}^2 .1-ML335; 16.2±3.0 μ M, K_{2P}^4 .1 (Q258K)-ML335; 13.7±7.0 μ M, K_{2P}^2 .1-ML402; 13.6±1.5 μ M, K_{2P}^4 .1 (Q258K)-ML402) but with a lower magnitude response than K_{2P}^2 .1^[1].



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