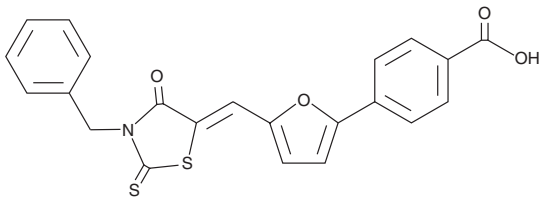
PRODUCT INFORMATION

Leukadherin 1

Item No. 14855

CAS Registry No.:	344897-95-6
Formal Name:	4-[5-[[4-oxo-3-(phenylmethyl)-2-thioxo-5-thiazolidinylidene] methyl]-2-furanyl]-benzoic acid
MF:	$C_{22}H_{15}NO_4S_2$
FW:	421.5
Purity:	≥95%
UV/Vis.:	λ_{max}: 312, 449 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



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

Laboratory Procedures

Leukadherin 1 is supplied as a crystalline solid. A stock solution may be made by dissolving the leukadherin 1 in the solvent of choice. Leukadherin 1 is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of leukadherin 1 in these solvents is approximately 1 mg/ml.

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

Description

Leukadherin 1 is a small molecule allosteric activator of CD11b/CD18 that increases K562 cell adhesion to an endogenous CD11b/CD18 ligand, fibrinogen (EC_{50} = 4 µM).[1] It increases adhesion and decreases de-adhesion of murine neutrophils, leading to reduced chemotaxis. It acts by reducing the rolling velocity of leukocytes in mouse cremaster muscle, decreasing the number of leukocytes recruited to injured tissue. Leukadherin 1 is anti-inflammatory in a zebrafish tailfin injury model and a mouse model of anti-glomerular basement membrane nephritis. It also competitively inhibits YopH (K_i = 1.94 µM), a tyrosine phosphorylase secreted by *Y. pestis* into immune cells to block signal transduction, and anthrax lethal factor metalloproteinase, a component of anthrax toxin (IC_{50} = 6 µM).[2,3]

References

1. Maiguel, D., Faridi, M.H., Wei, C., *et al.* Small molecule-mediated activation of the integrin CD11b/CD18 reduces inflammatory disease. *Sci. Signal* **4(189)**, ra57 (2011).
2. Tautz, L., Bruckner, S., Sareth, S., *et al.* Inhibition of Yersinia tyrosine phosphatase by furanyl salicylate compounds. *J. Biol. Chem.* **280(10)**, 9400-9408 (2005).
3. Forino, M., Johnson, S., Wong, T.Y., *et al.* Efficient synthetic inhibitors of anthrax lethal factor. *Proc. Natl. Acad. Sci. U.S.A.* **102(27)**, 9499-9504 (2005).

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