

Product Data Sheet

Product Name: Corisin
Cat. No.: GC78943

Chemical Properties

Cas. No. 2651277-02-8

Formula $C_{84}H_{133}N_{25}O_{28}S$ M.Wt 1973.17

Solubility DMSO: 25 mg/mL (12.67 mM; Need ultrasonic) Storage Sealed storage, away from moisture

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure



Background

Corisin is a pro-apoptotic small peptide produced by Staphylococcus species. Corisin binds to serum albumin to target organs such as the lungs and kidneys, induces cellular senescence, apoptosis and epithelial-mesenchymal transition, and accelerates the progression of organ fibrosis including pulmonary fibrosis and diabetic renal fibrosis. Corisin levels are closely associated with coronavirus

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

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disease 2019 (COVID-19), diabetic chronic kidney disease (CKD), non-diabetic CKD, and idiopathic pulmonary fibrosis (IPF) [1] [2] [3].

In Vivo, Corisin (5 mg/kg; i.p.; three times per week for 2 weeks) significantly exacerbates renal fibrosis and renal function injury in TGF β 1 transgenic mice by promoting inflammatory responses and fibrotic changes^[2]. Corisin (administered intratracheally; once daily for 2 consecutive days) induces acute exacerbation of pulmonary fibrosis in TGF β 1 TG mice, which is characterized by significant increases in pulmonary inflammation, collagen deposition, levels of profibrotic mediators, and epithelial cell apoptosis^[3].

In Vitro, Corisin (48 h) significantly increases phosphatidylserine externalization in human umbilical vein endothelial cells, and this effect is blocked by anti-Corisin monoclonal antibodies^[1]. Corisin (5 μ M; 24 h) significantly enhances tissue factor activity in A549 alveolar epithelial cells, THP-1 monocytes and human umbilical vein endothelial cells, and this effect is reversed by anti-Corisin monoclonal antibody or anti-TF antibody^[1]. Corisin (5 μ M; 24 h) significantly reduces thrombomodulin activity in A549 alveolar epithelial cells, THP-1 monocytes and human umbilical vein endothelial cells, and this effect is reversed by anti-Corisin monoclonal antibodies^[1]. Corisin (20-40 μ g/mL; 24-48 h) promotes apoptosis, disrupts cell cycle progression and reduces proliferative activity in normal human renal proximal tubular epithelial cells, human Caki-2 renal tubular epithelial cells and normal human podocytes, while anti-Corisin monoclonal antibodies inhibit these effects^[2]. Corisin (20-40 μ g/mL; 48 h) induces cellular senescence in human Caki-2 renal tubular epithelial cells, normal human primary renal tubular epithelial cells, and normal human primary podocytes, which is characterized by increased senescence-associated β -galactosidase activity, altered expression of senescence marker genes, and abnormal nuclear morphology. This effect is inhibited by anti-Corisin monoclonal antibodies^[2]. Corisin (20-40 μ g/mL; 48 h) induces epithelial-mesenchymal transition in human normal primary podocytes and human normal primary renal proximal tubular epithelial cells, which is characterized by changes in cell morphology and upregulated expression of mesenchymal marker genes, while anti-corisin monoclonal antibodies inhibit these effects^[2]. Stimulation of primary human renal proximal tubular epithelial cells with Corisin (20 μ g/mL; 24 h) activates pathways associated with DNA damage response, cellular senescence, senescence-associated secretory phenotype, and myofibroblast-like differentiation^[2].

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Corisin (0.5-50 μ M; 16-48 h) induces dose-dependent apoptosis in A549 alveolar epithelial cells^[3].

References:

- [1]. Tsuruga T, et al. Role of microbiota-derived corisin in coagulation activation during SARS-CoV-2 infection. J Thromb Haemost. 2024;22(7):1919-1935.
- [2]. Yasuma T, et al. Microbiota-derived corisin accelerates kidney fibrosis by promoting cellular aging. Nat Commun. 2025;16(1):7591. Published 2025 Aug 25.
- [3]. D'Alessandro-Gabazza CN, et al. A Staphylococcus pro-apoptotic peptide induces acute exacerbation of pulmonary fibrosis. Nat Commun. 2020;11(1):1539. Published 2020 Mar 24.

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