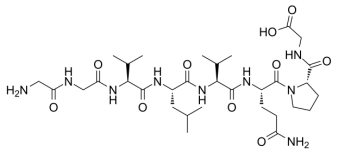
Larazotide

Cat. No.:	HY-106268
CAS No.:	258818-34-7
Molecular Formula:	$C_{32}H_{55}N_9O_{10}$
Molecular Weight:	725.83
Target:	Gap Junction Protein
Pathway:	Cytoskeleton
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Larazotideis a peptide which is an orally active zonulin antagonist. Larazotide shows antiviral activity to varicella-zoster virus (VZV) with EC_{50}s of 44.14 and 59.06 μM for strain OKA and 07-1, respectively. Larazotide can be used for the research of celiac disease and infection[1][2].

In Vitro

Larazotide (1-100 μM; 5 d) affects Vero cell growth[1].
Larazotide (1-100 μM; 3 d) shows antiviral activity to varicella-zoster virus (VZV) with EC_{50}s of 44.14 and 59.06 μM for strain OKA and 07-1, respectively[1].
Larazotide (1 and 3 mM; 72 h) inhibits cytokine-induced tight junction permeability in Caco-2 cells[2].
Larazotide (100 μM; 3 h) inhibits gliadin translocation across Caco-2 monolayers[2].
Larazotide (12.5 mM; 1 h) inhibits PTG-induced ZO-1 redistribution and actin cytoskeletal rearrangement in IEC6 cells[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Cytotoxicity Assay[1]

Cell Line:	Vero cell line
Concentration:	1-100 μM
Incubation Time:	5 days
Result:	Inhibited Vero cell growth with an CC_{50} value of 82.5 μM.

In Vivo

Larazotide (250 μg; i.p. twice a week for 7 weeks) inhibits intestinal permeability in gluten-sensitive transgenic mice[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	HLA-HCD4/DQ8 double transgenic mice[2]
Dosage:	250 μg
Administration:	Intraperitoneal injection; 250 μg twice a week for 7 weeks
Result:	Improved barrier function parameters and reduced macrophage counts in the lamina propria to control levels.

CUSTOMER VALIDATION

- Nat Commun. 2020 Jun 19;11(1):3151.
- EBioMedicine. 2021 Oct 20;73:103641.
- J Dent Res. 2022 Sep 12;220345221118508.

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REFERENCES

[1]. Di Micco S, et al. Peptide Derivatives of the Zonulin Inhibitor Larazotide (AT1001) as Potential Anti SARS-CoV-2: Molecular Modelling, Synthesis and Bioactivity Evaluation. Int J Mol Sci. 2021 Aug 30;22(17):9427.

[2]. Gopalakrishnan S, et al. Larazotide acetate regulates epithelial tight junctions in vitro and in vivo. Peptides. 2012 May;35(1):86-94.

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