

WL47

Cat. No.:	HY-P2288
Molecular Formula:	C ₈₀ H ₁₃₀ N ₂₄ O ₁₇ S ₄
Molecular Weight:	1828.3
Sequence:	Lys-Leu-Arg-Met-Trp-Ser-Cys-Cys-Ser-Trp-Met-Arg-Leu-Lys
Sequence Shortening:	KLRMWSCCSWMRLK
Target:	Others
Pathway:	Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description	WL47, a high-affinity cavolin-1 (CAV1) ligand (K _d =23 nM), is a potent disrupter of CAV1 oligomers. WL47 shows selectivity for CAV1 over BSA, casein and HEWL. WL47 is 80% smaller in length than the original T20 (HY-P0052) parent sequence and can be used for the study of caveolin-1 function ^[1] .
IC ₅₀ & Target	Kd: 23 nM (cavolin-1) ^[1]
In Vitro	<p>Caveolin-1 (CAV) is a monotonic membrane protein, 22 kDa, it penetrates only one leaflet of the lipid bilayer, and both the N- and C-termini remain on the cytoplasmic side. Multiple copies of CAV oligomerize can form high molecular weight complexes that bend the membrane inward to form invaginations, termed “caveolae,” of 50-100 nm in diameter. T20 is a 36 amino acid peptide derived from gp41 and blocks HIV viral fusion with CD4⁺ T-cells. WL47 is 80% smaller in length and has 7500-fold greater affinity than the original T20 parent sequence.</p> <p>In vitro, Demonstrating WL47 activity with CAV oligomers and a method for measuring the degree of oligomerization. A variant of CAV (CAV(FLV)) that spontaneously oligomerizes to form CAV nanoparticles with diameters is used to examine deoligomerization by WL47. WL47 effectively disrupts these nanoparticles, but it does not disrupt oligomerization in the presence of a reducing agent, this demonstrating that WL47 function requires dimerization by disulfide bond.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>

REFERENCES

[1]. Amanda J H Gilliam, et al. Affinity-Guided Design of Caveolin-1 Ligands for Deoligomerization. J Med Chem. 2016 Apr 28;59(8):4019-25.

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

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