

Gap 26 TFA

Cat. No.:	HY-P1082A	
Molecular Formula:	C ₇₂ H ₁₀₈ F ₃ N ₁₉ O ₂₁ S	
Molecular Weight:	1664.8	
Sequence Shortening:	VCYDKSFPISHVR	VCYDKSFPISHVR (TFA Salt)
Target:	Gap Junction Protein	
Pathway:	Cytoskeleton	
Storage:	Sealed storage, away from moisture	
	Powder -80°C 2 years	
	-20°C 1 year	
	* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)	

SOLVENT & SOLUBILITY

In Vitro	DMSO : 100 mg/mL (60.07 mM; Need ultrasonic)																			
	H ₂ O : 50 mg/mL (30.03 mM; Need ultrasonic)																			
	<table border="1"> <thead> <tr> <th rowspan="2">Concentration</th> <th colspan="3">Mass</th> </tr> <tr> <th>1 mg</th> <th>5 mg</th> <th>10 mg</th> </tr> </thead> <tbody> <tr> <td>1 mM</td> <td>0.6007 mL</td> <td>3.0034 mL</td> <td>6.0067 mL</td> </tr> <tr> <td>5 mM</td> <td>0.1201 mL</td> <td>0.6007 mL</td> <td>1.2013 mL</td> </tr> <tr> <td>10 mM</td> <td>0.0601 mL</td> <td>0.3003 mL</td> <td>0.6007 mL</td> </tr> </tbody> </table>	Concentration	Mass			1 mg	5 mg	10 mg	1 mM	0.6007 mL	3.0034 mL	6.0067 mL	5 mM	0.1201 mL	0.6007 mL	1.2013 mL	10 mM	0.0601 mL	0.3003 mL	0.6007 mL
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<p>Please refer to the solubility information to select the appropriate solvent.</p>																				
In Vivo	<ol style="list-style-type: none"> Add each solvent one by one: PBS Solubility: 100 mg/mL (60.07 mM); Clear solution; Need ultrasonic Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (1.50 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (1.50 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (1.50 mM); Clear solution 																			

BIOLOGICAL ACTIVITY

Description	Gap 26 TFA is a connexin mimetic peptide, composed of residue numbers 63-75 of the first extracellular loop of connexin 43 (gap junction blocker), containing the SHVR amino acid motif ^[1] .
In Vitro	Gap 26 (0.25 mg/mL, 30 min) reduces the wave size in the three cell lines (RBE4, SV-ARBEc and ECV304). Gap 26 (0.25 mg/mL,

30 min) completely abolishes the InsP3-triggered ATP response and reduced the ATP release to below the control level, indicating that the basal ATP release is also affected^[1].

Gap 26 does indeed significantly inhibit our InsP3-triggered intercellular calcium waves, but it did not have any effect on dye coupling through junctional channels as evidenced by the FRAP experiments, despite the fact that connexin 43 was present in the cell lines used^[1].

Gap 26 (100-300 μ M) dose-dependently reduces the rhythmic responses of rabbit superior mesenteric arteries, with IC_{50} of $28.4 \pm 3.4 \mu$ M^[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Cell Metab. 2021 Feb 2;33(2):283-299.e9.
- Biomed Pharmacother. 2022 Apr 22;150:112973.
- ACS Chem Biol. 2020 Jun 19;15(6):1392-1400.
- Lab Invest. 2021 Sep 14.
- Toxicology. 2022 Aug 4;153283.

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REFERENCES

[1]. Katleen Braet, et al. Photoliberating inositol-1,4,5-trisphosphate triggers ATP release that is blocked by the connexin mimetic peptide gap 26. Cell Calcium. 2003 Jan;33(1):37-48.

[2]. Chaytor AT, et al. Peptides homologous to extracellular loop motifs of connexin 43 reversibly abolish rhythmic contractile activity in rabbit arteries. J Physiol. 1997 Aug 15;503 (Pt 1):99-110.

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

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