

Thioredoxin reductase peptide TFA

Cat. No.:	HY-P1948A		
Molecular Formula:	C ₆₈ H ₁₀₇ F ₃ N ₁₈ O ₂₀ S ₂		
Molecular Weight:	1617.81		
Sequence Shortening:	WGLGGTCVNVGCIPK	WGLGGTCVNVGCIPK (TFA salt)	
Target:	Others		
Pathway:	Others		
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 (61.81 mM)
 H₂O : 12.5 mg/mL (7.73 mM; Need ultrasonic)
 * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	0.6181 mL	3.0906 mL	6.1812 mL
	5 mM	0.1236 mL	0.6181 mL	1.2362 mL
	10 mM	0.0618 mL	0.3091 mL	0.6181 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.5 mg/mL (1.55 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (1.55 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.5 mg/mL (1.55 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Thioredoxin reductase peptide TFA corresponds to residues 53–67 in thioredoxin reductase (TrxR), used in thioredoxin reductase research. Thioredoxin reductase acts as a reductant of disulfide-containing proteins and plays crucial role in cellular antioxidant defense^{[1][2]}.

REFERENCES

- [1]. Jan YH, et al. Cross-linking of thioredoxin reductase by the sulfur mustard analogue mechlorethamine(methylbis(2-chloroethyl)amine) in human lung epithelial cells and rat lung: selective inhibition of disulfide reduction but not redox cycling. Chem Res To
- [2]. Valette O, et al. Biochemical Function, Molecular Structure and Evolution of an Atypical Thioredoxin Reductase from *Desulfovibrio vulgaris*. Front Microbiol. 2017 Sep 29;8:1855.
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Caution: Product has not been fully validated for medical applications. For research use only.

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