

# PRODUCT INFORMATION



## Azurin (50-77) (*P. aeruginosa*) (trifluoroacetate salt)

Item No. 36725

<b>Formal Name:</b>	L-leucyl-L-seryl-L-threonyl-L-alanyl-L-alanyl-L- $\alpha$ -aspartyl-L-methionyl-L-glutamylglycyl-L-valyl-L-valyl-L-threonyl-L- $\alpha$ -aspartylglycyl-L-methionyl-L-alanyl-L-serylglycyl-L-leucyl-L- $\alpha$ -aspartyl-L-lysyl-L- $\alpha$ -aspartyl-L-tyrosyl-L-leucyl-L-lysyl-L-prolyl-L- $\alpha$ -aspartyl-L-aspartic acid, trifluoroacetate salt	H—Leu—Ser—Thr—Ala—Ala—Asp—Met—Gln—Gly—Val— Val—Thr—Asp—Gly—Met—Ala—Ser—Gly—Leu—Asp— Lys—Asp—Tyr—Leu—Lys—Pro—Asp—Asp—OH • XCF <sub>3</sub> COOH
<b>Synonyms:</b>	Azurin p28, p28	
<b>Peptide Sequence:</b>	LSTAADMQGVVTDGMASGLDKDYLPDD-OH	
<b>MF:</b>	C <sub>122</sub> H <sub>197</sub> N <sub>31</sub> O <sub>47</sub> S <sub>2</sub> • XCF <sub>3</sub> COOH	
<b>FW:</b>	2,914.2	
<b>Purity:</b>	≥95%	
<b>Supplied as:</b>	A solid	
<b>Storage:</b>	-20°C	
<b>Stability:</b>	≥4 years	

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Azurin (50-77) (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the azurin (50-77) (trifluoroacetate salt) in the solvent of choice, which should be purged with an inert gas. Azurin (50-77) (trifluoroacetate salt) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of azurin (50-77) (trifluoroacetate salt) in ethanol and DMF is approximately 5 mg/ml and approximately 30 mg/ml in DMSO.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of azurin (50-77) (trifluoroacetate salt) can be prepared by directly dissolving the solid in aqueous buffers. The solubility of azurin (50-77) (trifluoroacetate salt) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Azurin (50-77) is a peptide fragment of the copper-containing bacterial protein azurin, which is found in *P. aeruginosa*, and has cell cycle arrest, cancer proliferation, and angiogenesis-regulating activities.<sup>1,2</sup> It is an inhibitor of VEGFR2 (IC<sub>20</sub> = ~10.7  $\mu$ M).<sup>2</sup> Azurin (50-77) (20  $\mu$ M) induces cell cycle arrest at the G<sub>2</sub>/M phase in MCF-7 cells. It reduces MCF-7 and ZR-75-1 breast cancer cell proliferation when used at a concentration of 50  $\mu$ M. Azurin (50-77) reduces VEGF-A-induced capillary tube formation (IC<sub>50</sub> = 12  $\mu$ M), as well as decreases cell membrane-associated levels of F-actin, focal adhesion kinase (FAK), and paxillin and increases extracellular levels of platelet endothelial cell adhesion molecule-1 (PECAM-1) in human umbilical vein endothelial cells (HUVECs) when used at a concentration of 25  $\mu$ M.<sup>2</sup> *In vivo*, azurin (50-77) (10 mg/kg per day) reduces tumor volume in an MCF-7 mouse xenograft model.<sup>1</sup>

### References

1. Yamada, T., Mehta, R.R., Lekmine, F., *et al.* *Mol. Cancer Ther.* **8**(10), 2947-2958 (2009).
2. Mehta, R.R., Yamada, T., Taylor, B.N., *et al.* *Angiogenesis* **14**(3), 355-369 (2011).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

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