

# AP-III-a4 (hydrochloride)

Catalog No: tcsc3145



## Available Sizes

**Size:** 5mg

**Size:** 10mg

**Size:** 25mg

**Size:** 50mg



## Specifications

### Formula:

$C_{31}H_{44}ClFN_8O_3$

### Pathway:

Metabolic Enzyme/Protease

### Target:

Enolase

### Purity / Grade:

>98%

### Solubility:

DMSO :  $\geq 53$  mg/mL (83.97 mM)

### Alternative Names:

ENOblock hydrochloride

### Observed Molecular Weight:

631.18

## Product Description

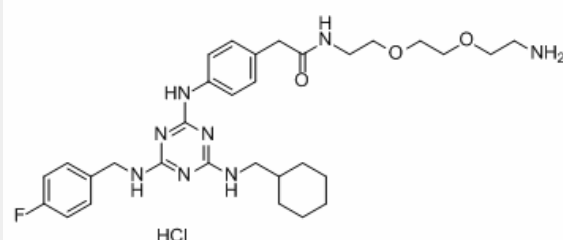
ENOblock Hcl(AP-III-a4 Hcl) is a novel small molecule which is the first, nonsubstrate analogue that directly binds to enolase and

inhibits its activity (IC<sub>50</sub>=0.576 uM); inhibit cancer cell metastasis in vivo.

IC<sub>50</sub> value: 0.576 uM [1]

Target: enolase

Enolase is a component of the glycolysis pathway and a “moonlighting” protein, with important roles in diverse cellular processes that are not related to its function in glycolysis. However, small molecule tools to probe enolase function have been restricted to crystallography or enzymology. In this study, we report the discovery of the small molecule “ENOblock”, which is the first, nonsubstrate analogue that directly binds to enolase and inhibits its activity. ENOblock was isolated by small molecule screening in a cancer cell assay to detect cytotoxic agents that function in hypoxic conditions, which has previously been shown to induce drug resistance. Further analysis revealed that ENOblock can inhibit cancer cell metastasis in vivo. Moreover, an unexpected role for enolase in glucose homeostasis was revealed by in vivo analysis. Thus, ENOblock is the first reported enolase inhibitor that is suitable for biological assays. This new chemical tool may also be suitable for further study as a cancer and diabetes drug candidate.



All products are for RESEARCH USE ONLY. Not for diagnostic & therapeutic purposes!