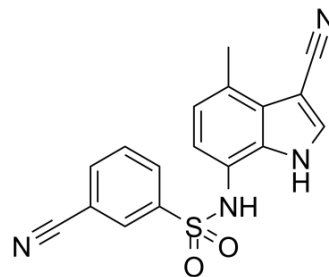


## E7820

<b>Cat. No.:</b>	HY-14571		
<b>CAS No.:</b>	289483-69-8		
<b>Molecular Formula:</b>	C <sub>17</sub> H <sub>12</sub> N <sub>4</sub> O <sub>2</sub> S		
<b>Molecular Weight:</b>	336.37		
<b>Target:</b>	Integrin		
<b>Pathway:</b>	Cytoskeleton		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	DMSO : 100 mg/mL (297.29 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	<b>Preparing Stock Solutions</b>	1 mM	2.9729 mL	14.8646 mL	29.7292 mL
		5 mM	0.5946 mL	2.9729 mL	5.9458 mL
10 mM		0.2973 mL	1.4865 mL	2.9729 mL	
Please refer to the solubility information to select the appropriate solvent.					
<b>In Vivo</b>	<ol style="list-style-type: none"> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 40% PEG300 &gt;&gt; 5% Tween-80 &gt;&gt; 45% saline Solubility: ≥ 2.08 mg/mL (6.18 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (7.43 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% corn oil Solubility: ≥ 2.5 mg/mL (7.43 mM); Clear solution</li> </ol>				

### BIOLOGICAL ACTIVITY

<b>Description</b>	E7820 (ER68203-00), an orally active aromatic sulfonamide derivative, is a unique angiogenesis inhibitor suppressing an expression of integrin alpha2 subunit on endothelium. E7820 inhibits rat aorta angiogenesis with an IC <sub>50</sub> of 0.11 µg/ml. E7820 modulates α-1, α-2, α-3, and α-5 integrin mRNA expression. Antiangiogenic and antitumor activity <sup>[1][2]</sup> .
<b>In Vitro</b>	E7820 (ER68203-00) inhibits both bFGF- and VEGF-driven tube formation of human umbilical vascular endothelial cell (HUVEC) in a dose-dependent manner with IC <sub>50</sub> of 0.20 and 0.24 µg/ml, respectively <sup>[1]</sup> . E7820 inhibits proliferation of HUVEC induced by either bFGF or VEGF in serum-free medium (SFM). The IC <sub>50</sub> values are 0.10

and 0.081 µg/ml, respectively. Antiproliferative activity of E7820 against both WiDr and LoVo cells is very weak compared with that against HUVEC. The values of IC50 were 29 and 15 µg/ml, respectively<sup>[1]</sup>.  
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

#### In Vivo

E7820 (ER68203-00) (50-200 mg/kg; p.o. ; twice daily for 14 days) delays the growth of WiDr cells inoculated s.c.<sup>[1]</sup>.  
E7820 (200-400 mg/kg; p.o.;once daily for 4 days) potently inhibits WiDr-induced angiogenesis<sup>[1]</sup>.  
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Six-week-old female nude mice (KSN mice, WiDr-induced angiogenesis model) <sup>[1]</sup>
Dosage:	50, 100, 200 mg/kg
Administration:	p.o. ; twice daily for 14 days from 2 days after inoculation of the tumor cells
Result:	The antitumor effect was dose-dependent at 50, 100, and 200 mg/kg, and the tumor growth rates were 52%, 46%, and 27%, respectively.

## CUSTOMER VALIDATION

- Cell Biol Int. 2020 Feb;44(2):610-620.
- Cell Biol Int. 2020 Feb;44(2):610-620.

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## REFERENCES

[1]. Funahashi Y, et al. Sulfonamide derivative, E7820, is a unique angiogenesis inhibitor suppressing an expression of integrin alpha2 subunit on endothelium. Cancer Res. 2002;62(21):6116-6123.

[2]. Ito K, et al. Enhanced anti-angiogenic effect of E7820 in combination with erlotinib in epidermal growth factor receptor-tyrosine kinase inhibitor-resistant non-small-cell lung cancer xenograft models. Cancer Sci. 2014;105(8):1023-1031.

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

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