## Rhamnazin

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MedChemExpress

Cat. No.:	HY-N8342		
CAS No.:	552-54-5		
Molecular Formula:	C <sub>17</sub> H <sub>14</sub> O <sub>7</sub>	оно Д. Д. он	
Molecular Weight:	330.29		
Target:	VEGFR		
Pathway:	Protein Tyrosine Kinase/RTK	CH	
•	Please store the product under the recommended conditions in the Certificate of Analysis.		

Discussion     Reammazin is an orally active inhibitor of VEGFR2 signaling with an ICsg of 4.68 µM against VEGFR2 kinase. Rhamnazin shows potent antiangiogenic activity and antitumor efficacy <sup>[1]</sup> . Rhamnazin ishows antioxidant and anti-inflammatory properties <sup>[2]</sup> .       ICsg & Target     VEGFR2 4.68 µM (ICsg)       In Vitro     Rhamnazin (5-40 µM) inhibits proliferation, migration and tube formation of HUVECs induced by VEGF <sup>[1]</sup> . Rhamnazin (0-20 µM) attenuates VEGFR-2 tryosine kinase activity and VEGFR2 signaling pathway <sup>11</sup> . Rhamnazin (0-40 µM; 24 h) inhibits the proliferation and VEGFR2 signaling pathway of breast cancer cells <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only. Cell Migration Assay <sup>11</sup> Cell Line:     HUVECs       Concentration:     0, 10, 15 and 20 µM       Incubation Time:     6 h       Result:     Strongly inhibited the migration of HUVECs.       Western Blot Analysis <sup>[1]</sup> Cell Line:     HUVECs       Concentration:     0, 10, 15 and 20 µM       Incubation Time:     24 h       Result:     Decreased VEGF binding to VEGFR2. Reduced VEGF-stimulated phosphorylation of VEGFR2 in anner.       Cell Unite:     HUVECs       Concentration:     24 h       Result:     Decreased VEGF binding to VEGFR2. Reduced VEGF-stimulated phosphorylation of VEGFR2 in annere.       Cell Proliferation Assay <sup>[1]</sup> Hectagar, T-470, SK-BR-3, MCF-7 and MDA-MB-231.	<b>BIOLOGICAL ACTIV</b>		
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## Product Data Sheet

	Concentration:	0, 10, 15, 20, 30 and 40 μM		
	Incubation Time:	24 h		
	Result:	Inhibited cell growth with IC <sub>50</sub> s of 19, 27, 32, 41 and 64 μM against MDA-MB-231, MCF-7, SK- BR-3, T-47D and HCC1937 in the presence of VEGF, respectively.		
In Vivo	Rhamnazin (5-20 mg/kg model <sup>[2]</sup> .	Rhamnazin (200 mg/kg; i.g.; daily for 25 days) inhibits breast cancer growth and angiogenesis in mice <sup>[1]</sup> . Rhamnazin (5-20 mg/kg; i.p.; once) shows strong antioxidant and anti-inflammatory properties in the rat acute lung injury model <sup>[2]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.		
	Animal Model:	BALB/c nude mice, breast cancer xenograft model <sup>[1]</sup>		
	Dosage:	200 mg/kg		
	Administration:	Intragastric administration, daily for 25 days		
	Result:	Dramatically suppressed tumor volumes by 47% compared with the vehicle group. Showed a significant reduction of pVEGFR2 <sup>Tyr951</sup> -positive cells in tumors. Resulted in downregulation of VEGFR2 downstream molecules phosphorylation including MAPK, AKT		

## REFERENCES

[1]. Yu Y, et al. Rhamnazin, a novel inhibitor of VEGFR2 signaling with potent antiangiogenic activity and antitumor efficacy. Biochem Biophys Res Commun. 2015 Mar 20;458(4):913-9.

[2]. Wu G, et al. ANTIOXIDANT AND ANTI-INFLAMMATORY EFFECTS OF RHAMNAZIN ON LIPOPOLYSACCHARIDE-INDUCED ACUTE LUNG INJURY AND INFLAMMATION IN RATS. Afr J Tradit Complement Altern Med. 2017 Jun 5;14(4):201-212.

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

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