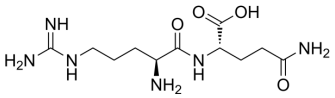
Arginyl-Glutamine

Cat. No.:	HY-P4253
CAS No.:	2483-17-2
Molecular Formula:	$C_{11}H_{22}N_6O_4$
Molecular Weight:	302.33
Sequence:	Arg-Gln
Sequence Shortening:	RQ
Target:	VEGFR
Pathway:	Protein Tyrosine Kinase/RTK
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Arginyl-Glutamine is a dipeptide that can decrease VEGF levels and inhibit retinal neovascularization in a mouse model of oxygen-induced retinopathy[1].
IC_{50} & Target	VEGF[1]
In Vitro	Arginyl-Glutamine (0.5-1.5 mM; 48 h) results in a statistically significant dose-dependent decrease soluble VEGF expression into the culture medium in human RPE cells[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Arginyl-Glutamine (1-5 g/kg/day as a hydrochloride salt; i.p.; twice daily) dramatically inhibits retinal neovascularization in the mouse oxygen-induced retinopathy (OIR) model[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	C57BL6/J mouse pups, oxygen-induced retinopathy (OIR) model[1]
Dosage:	1.0, 2.5, or 5 g/kg per day
Administration:	Intraperitoneal injection, twice daily
Result:	Significantly decreased preretinal nuclei. Reduced neovascular tufts and vascular leakage in retinal vessels. Reduced preretinal neovascularization by 82% ± 7% and reduced VEGF mRNA by 64% ± 9% at 5 g/kg per day.

REFERENCES

[1]. Neu J, et al. The dipeptide Arg-Gln inhibits retinal neovascularization in the mouse model of oxygen-induced retinopathy. Invest Ophthalmol Vis Sci. 2006 Jul;47(7):3151-5.

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

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA