

Table 1. Synopsis of the effects of the synthetic peptides on various *in vitro* and *in vivo* models

Researcher	AA Sequence	Treatment Duration	Optimum Concentration ^{*3}	Culture Conditions	<i>In vitro/in vivo</i> model
Yang & Goldspink (2002)	*1 (Human)	24 hours proliferation	Dose-dependent manner 1-100 ng/ml 5 ng/ml	Serum free media	C2C12 mouse myoblasts
Dluzniewska (2005)	*2 (Human)	Continuously present in the medium	25 µg	Injection left carotid artery	Male Mongolian gerbils
			100 ng/ml		Organotypic hippocampal cultures of neurodegeneration
Mills et al (2007)	*1 (Human)	48 hours proliferation 30 days period	Dose-dependent manner 15-100 ng/ml 25-50 ng/ml	Normal proliferation medium	Human MPCs
			Dose-dependent manner 1-10 µg 5-10 µg	Intramuscular injection	Mice
		14 hours migration assay	Dose-dependent manner 15-100 ng/ml 25 ng/ml	Serum free media	Human MPCs
			25 and 50 ng/ml	Polyethylene microtude technique	Mice
Carpenter (2008)	*2 (Human)		200 nM	Circumflex branch of the coronary artery	Sheep
Philippou et al (2009)	*4 (Human)	24 & 48 hours proliferation	Dose-dependent manner 0.5-50 ng/ml 50 ng/ml	0.5% FBS	C2C12 mouse myoblasts
Stavropoulou et al (2009)		48 hours proliferation	Dose-dependent manner 5-50 ng/ml 50 ng/ml	0.5% FBS	H9C2 rat myocardial cells
Milingos et al (2011)		24 & 48 hours proliferation	Dose-dependent manner 5-50 ng/ml 50 ng/ml	0.5% FBS	KLE Human endometrial adenocarcinoma cells
Philippou et al (2011)		24 & 48 hours proliferation	Dose-dependent manner 0.5-50 ng/ml 50 ng/ml	0.5% FBS	Human osteoblast-like osteosarcoma cells
Ates et al (2007)	*2 (Human)	48 hours proliferation	10 ng/ml	Culture media with 2% FCS	Human primary muscle cells Human skeletal muscle myoblasts

Table 1. (continue) Synopsis of the effects of the synthetic peptides on various *in vitro* and *in vivo* models

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Queasada et al (2009)	*2 (Human)	24 and 48 hours proliferation	Dose-dependent manner 10 ⁻⁹ to 10 ⁻⁵ g/ml	Serum free media	SH-SY5Y cells Human neuroblastoma
		7 days	5 and 20 µg	Subcutaneous injection	Long-Evans male rats
Collins et al (2010)	*5 (Human)	Migration 20 hours	Dose-dependent manner 1-100 ng/ml 30 ng/ml	Serum free media	Human mesenchymal stem cells isolated from bone marrow aspirates
		Proliferation 4 days	No effect		
Kandalla et al (2011)	*2 (Human)	Proliferation every 3 days treatment Counted at day 7	Dose-dependent manner 3-100 ng/ml 100 ng/ml	Serum free media	Primary human muscle cells
		Differentiation 7 days	Dose-dependent manner 10, 50 and 100 ng/ml		
Brisson & Barton (2012)	*6 (Rodent)	KIRA assay 15, 30, 60 minutes	IGF-1 (2, 10nM)+ Ea (10, 100 nM) Or/+ Eb (100 nM)	Serum free media	Mouse fibroblasts (P6)
		Proliferation	Dose-dependent manner Ea 1-100 nM Eb 1-100 nM 10 nM		C2C12 mouse myoblasts
		Migration 5 hours	Ea 100 nM Eb 100 nM		
		Differentiation	Ea 100 nM Eb 100 nM		

*1 NH₂-YQPPSTNKNTKSQRRKGSTFEEHK-COOH*2 NH₂-YQPPSTNKNTKSQR (-d)R (-d)KGSTFEEHK-NH₂

*3 When the authors indicated that a maximum response (e.g. proliferation, migration, etc) was observed

*4 YQPPSTNKNTKSQRRKGSTFEERK

*5 NH₂-YQPPSTNKNTSQ (l-R)(l-R)KGSTFEERK-COOH (naturally occurring)NH₂-YQPPSTNKNTSQ (d-R)(d-R)KGSTFEERK-amidated (D-form)NH₂-YQPPSTNKNTSQ (d-R)(d-R)KGATFEERK-amidated (S substituted by A)NH₂-EFSTKENQGTPSQHTNK (d-R)PYK (d-R)ks-amidated (Scramble)

*6 Ea HTDMPKTQKEVHLKNTSRGSAGNKTYRM

Eb HTDMPKTOKSPSLSTNKKTKLQRRRKGSTFEEHK

Scramble RFLHRTEKRATGTKDSNVQSKHTSMTKQPKY

FBS: Fetal Bovine Serum, FCS: Fetal Calf Serum.