

Introducing

OrthoGain™

Regenerate. Restore. Relieve.

India's First Autologous Exosome Kit Enriched with Growth Factors concentrate represents a breakthrough in regenerative medicine — combining autologous exosomes with platelet-derived growth factors (GFs) to accelerate healing, reduce inflammation, and restore mobility naturally.

CDSCO Approved | Clinically Proven | Autologous & Safe

Exosomes – Nature’s Nanocarriers

Exosomes are nanosized “biological messengers” released by cells. Rich in proteins, lipids, and genetic material, they deliver vital healing signals that promote repair and regeneration at the cellular level.



Key Growth Factors in Orthogain™

PDGF – Stimulates fibroblast activity, tendon and ligament repair

VEGF – Promotes angiogenesis for enhanced nutrient & oxygen delivery

EGF – Boosts cellular proliferation and wound healing

TGF – Drives collagen synthesis, cartilage repair, and bone remodelling

Growth Factor	PDGF	VEGF	EGF	TGF-beta	bFGF
Concentration	99443.75 pg/ml	3899 pg/ml	550 pg/ml	1732.50 pg/ml	2793 pg/ml

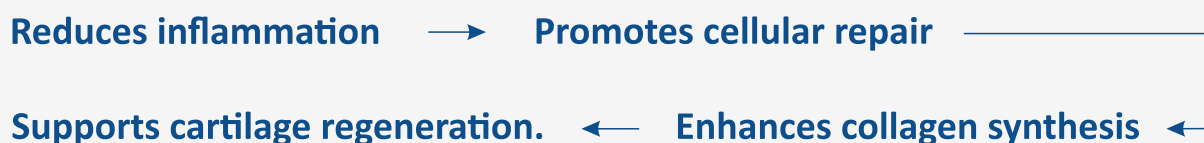
ELISA analysis verifies Orthogain elevated levels of PDGF, VEGF, EGF, and TGF-β, ensuring strong therapeutic activity. Consistent biomarker enrichment supports faster healing, improved outcomes, and better patient satisfaction.

The Synergy of Orthogain™

By combining autologous exosomes (loaded with mRNA & proteins) and concentrated growth factors, Orthogain™ delivers a pioneering regenerative solution for orthopaedics and sports medicine.

Mechanism

- ⚡ Orthogain works faster due to direct exosome-mediated cellular communication.
- ⚡ Lower inflammation, better patient comfort and quicker visible results.



Clinical Benefits

- ⚡ Faster Recovery from ligament tears, tendon injuries, and fractures
- ⚡ Reduced Pain & Inflammation — without steroid side effects
- ⚡ Enhanced Regeneration of muscles, cartilage, and bone
- ⚡ Improved Mobility & Performance for athletes and active patients
- ⚡ Autologous Safety — no rejection or allergy risk

How to prepare Orthogain?



Clinical Applications

Sports Injuries

- ACL & MCL ligament tears
- Meniscus injuries
- Muscle strains & microtears
- Rotator cuff injuries
- Tendon & ligament sprains

Orthopaedic Conditions

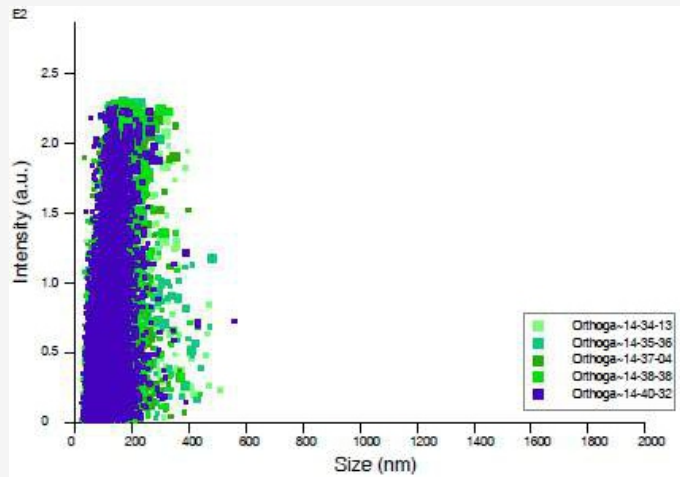
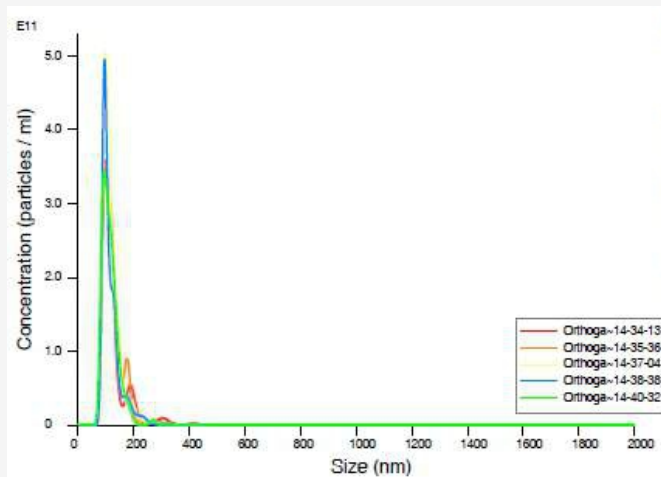
- Osteoarthritis (knee, hip, shoulder)
- Chronic tendinopathies (tennis elbow, Achilles tendonitis, plantar fasciitis)
- Bone fractures (accelerated healing & mineralization)
- Cartilage degeneration
- Post-surgical orthopaedic recovery

Orthogain vs PRP / GFC

Parameters	PRP	GFC	EXOS-GFC
Composition	Platelets with plasma	Platelet-derived growth factors	Autologous exosomes + growth factors
Mechanism	Indirect GF release	Direct GF delivery	Direct cellular communication + potent regenerative signaling
Regenerative capacity	Moderate	Improved	Superior – targets inflammation and stimulates true regeneration
Purity	Contains RBCs/WBCs	Contains cell Debris	RBC-free Cell-free, highly purified exosomes
Onset of results	4–6 weeks	2–3 weeks	1–2 weeks

Nanoparticle Tracking Analysis (NTA) Assay For Exosome Quantification

Nanoparticle Tracking Analysis (NTA) is a powerful technique used to measure the size distribution and concentration of nanoparticle, including exosomes. NTA combined the principles of laser light scattering and Brownian motion to provide detailed insight into exosome populations.



Particle Concentration

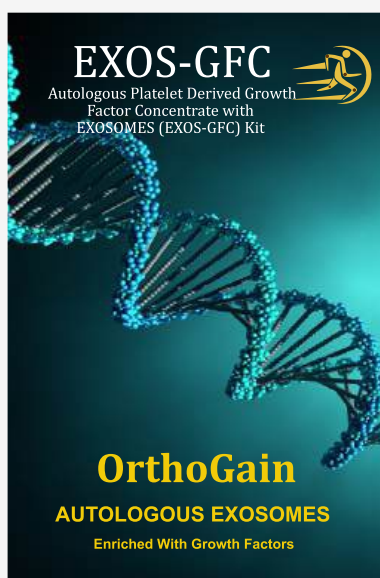
2.05e + 13 particles/ml
(Original Exosome Concentration)

Size Distribution

85.7% particles between 30 - 150 nm
Therapeutic peak at - 100 nm.

Purity : **>98%** Exosome and Growth Factor content with negligible impurities.

NTA demonstrates excellent batch consistency, ensuring predictable regenerative outcomes.



OrthoGain Kit Contains

OrthoGain Tubes 2x5ml
Plasma Collection Tube 2x10ml(Sterile)
Syringe 3x10ml
Filter 1 Piece
Mfg. Lic. No.: MFG/MD/2025/000469



Marketed by :

Kamal Encon Industries Limited
Plot No. 917, Sector-68, IMT Faridabad - 121001
Haryana, INDIA
Tel. : +91- 9971166553, +91- 8076287050
E: info@kamalmedtech.com
Website: www.kamalmedtech.com

Sweden office :

Kamal Encon Psilox AB, Vallvägen
4A, S75651, Uppsala, Sweden