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Certificate of Analysis

Chick Embryo Extract, Ultrafiltrate (CEE)

Molecular Biology Grade

Catalog No	CAS No	Molecular Formula	Molecular Weight	Storage	Doc No
AAA14749				4°C	

Lot No	Control No		Revision No	Revised By	Approved By	
L23111451	C23111451		030724			

Description:

Chick Embryo Extract, Ultrafiltrate is used as a supplement in some growth media formulations. It is prepared by blending 11-14 day old chick embryos in a balanced salt solution (3X embryo volume). The solution undergoes centrifugation to remove larger particles and debris. The supernatant is subjected to an ultrafiltration step with a 10kD MW cutoff to remove protein from the solution, producing a clear, amber liquid. This liquid is sterile-filtered.

Manufactured at an ISO9000 facility. Animals are sourced from a specific USDA-Registered facility using a veterinary-inspected flock. Chick Embryo Extract, Ultrafiltrate is protein free. It does not support the growth of viruses.

	Specifications:	**Lot Analysis:**
Appearance:	Pale-yellow, clear solution	Pale-yellow, clear solution
Total Protein (Biuret):	~0.0g/dL	0.0g/dL
Sterility (per 9CFR 113.26):	Negative	Negative
pH:	As Reported	7.3
Mycoplasma (per 9CFR 113.26):	Negative	Negative
Osmolality:	As Reported	294mOsm/Kg H_2O
Microbial Testing: *Pullorum typhoid* *Galisepticum* *M. synoviae* *M. meleagridis*	Negative	Negative
Recommended Dilutions:	1ml of extract/100ml of media	
Storage and Stability:	Chick Embryo Extract, Ultrafiltrate is protein-free; thus, it will not break down. May be stored at RT. Stable for 12 months after receipt. Storage at 4°C extends the stability for an additional 3-6 months. Some precipitate has been observed when frozen.	

Manufacture Date: 11/14/2023
Expiration Date: 03/2025

US Biological Application References: 1. Griffin, M.A., et al., J. Cell Science **117**: 5855-5863 (2004). 2. Clause, K.C., et al., Tissue Engineering Part C **16**: 375-385 (2010). 3. Montemurro, T., et al., J. Cell Mol. Med. **15**(4): 796–808 (2011). 4. Jiang, X., et al., Stem Cells Dev. **18**: 1059-1070 (2009). 5. Lokireddy, S., et al., Am. J. Physiol. Cell Physiol. (2011) http://ajpcell.physiology.org/content/early/2011/09/01/ajpcell.00114.2011. 6. de la Garza-Rodea, A.S. et al., (2013) FASEB J. doi: 10.1096/fj.13-233155. 7. Park S., et al. 2014. J Exp Zool Mol Dev Evol. **322**:156-165. 8. O'Connell G.C. and Pistilli E.E. Biochem Biophys Res Commun. 2015. **458**:614-619. 9. Escobar H, et al. Molecular Therapy–Nucleic Acids (2016) 5, e277; doi:10.1038/mtna.2015.52. 10. Masuda S, et al. 2018. Acta Physiol (Oxf). **222**(3). doi: 10.1111/apha.12975. Epub 2017 Oct 19. 11. Ahrens HE, et al. 2018. Skelet Muscle. 8(1):20. doi: 10.1186/s13395-018-0166-x.

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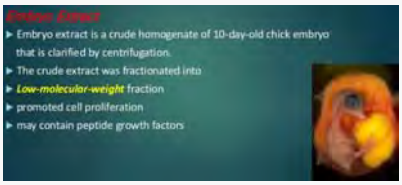
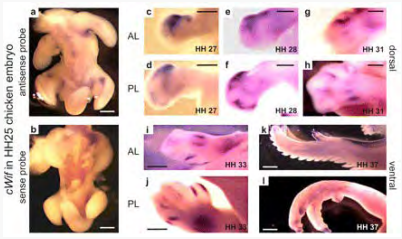
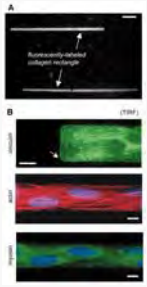


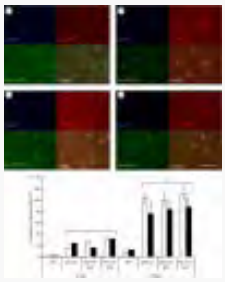
Background



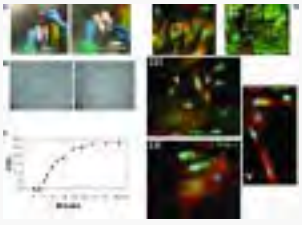
Gen. Reference 9



USB Ref.1: Nascent C2C12 skeletal myotubes on collagen patterns. (A) Patterns of collagen-coated rectangles, 20 μm wide and 200-1000 μm long, surrounded by interpenetrating polymer network (IPN). Even after 14 days of incubation with fluorescent collagen, the IPN shows no significant adsorption based on intensity. In addition, when measured by AFM, the apparent elastic modulus of the IPN is approximately half that of the collagen-coated glass. Scale bar, 200 μm. (B) Myoblasts plated onto the patterned coverslips were either stained for vinculin (and imaged by TIRF for clarity) or triple-stained for actin (red) myosin (green) and nuclei (blue). The cells invariably fuse to form multinucleated myotubes. The arrow points to the vinculin clustered at the edges of the patterned myotube, indicative of classical focal adhesion structures. The actin and myosin images show no striations and are of the same nascent myotube at day 6. Bars: in A 200 μm: in B 10 μm.



USB Ref.2:
Immunostaining of cells with anti-NeuN and anti-GFAP showing the neural-specific differentiation of MSCs. Anti-NeuN and anti-GFAP stain nuclei and cytoplasm, respectively. While many cells cultured under three-dimensional conditions (collagen (b), collagen–FN:



USB Ref.3:
Isolation, culture and immunocytochemical characterization of HUCPC. The dissection under sterile condition of foetal and full-term cords was performed to expose the WJ, the vein and arteries (A). After the in vitro expansion of foetal HUCPC (B) the cells ..