

Product-Data-Sheet for extracellular vesicles from WJ-MSC/TERT273

Version: May 2021

Evercyte Ord. No.:	EV-059-0273
Designation:	EVs from WJ-MSC/TERT273
Description:	EVs are produced by telomerized Wharton’s Jelly derived mesenchymal stem cells grown in a hollow fiber bioreactor and are enriched from cell culture supernatants using tangential flow filtration (TFF) under sterile conditions.
Biosafety Level:	1
Shipped:	Frozen on dry ice
Particle numbers:	1 x 10 ⁹ in 100 µl buffer (Cat# EV-059-0273-A1) 5 x 10 ⁹ in 50 µl buffer (Cat# EV-059-273-A2)
Storage medium:	20 mM HEPES
EV cell factory:	WJ-MSC/TERT273 (Evercyte, Cat# CHT-059-0273), BSL1 The cells have been tested negative for HIV, HepA, HepB, HepC and Parvo-B-19, do not show bacterial (incl. mycoplasma contaminations) and fungal contaminations and are authentic as demonstrated by STR profiling. Moreover, the cells express typical marker proteins of mesenchymal stem cells and can be differentiated towards adipocytes, chondrocytes and osteoblasts.
EV production system:	EVs are produced in a hollow fiber bioreactor system (FiberCell Systems) in MesenCult™-ACF Plus medium (STEMCELL TECHNOLOGIES, Cat# 05448)
EV enrichment:	EVs are enriched from cell culture supernatant using tangential flow filtration with a modified Polyethersulfone (mPES) membrane with a MWCO of 300 kDa.
Characteristics:	The particles have an average size of 100-200 nm (Nano Particle Tracking analysis, NTA), show the typical EV morphology with a lipid double layer membrane (cryo EM) and the presence of syntenin and CD81, absence of calnexin (western blot). Additionally, the EVs show anti-inflammatory, neo-angiogenic, anti-fibrotic activity and induce fibroblast migration and proliferation as demonstrated using in vitro bioassays. 1 x 10 ⁹ particles correspond to 400 µg protein (BCA assay).
Thawing and storage:	Upon arrival immediately transfer the product to -80°C. Store product at -80°C for up to 6 months. Thaw the EVs on ice, centrifuge before opening the tube to ensure that the solution is collected at the bottom of the tube and mix carefully by pipetting up and down. In order to avoid multiple freeze / thaw cycles aliquot the solution and store aliquots at -80°C until use.

After thawing, store the EVs at 4°C for a maximum of 1 day.

Quality control testing: EVs are negative for Mycoplasma contaminations as tested using MycoAlert™ Mycoplasma Detection Kit from Lonza.
EVs are negative for bacterial and fungal contaminations as tested according to Ph- Eur. 2.6.1. / USP <71>.
The Endotoxin level is below 0.01 EU/ml as tested using LAL test according to Ph. ph. 2.6.14. / USP <85>.

Please Note:

The classification of biosafety level is based on Austrian Legislation (Gentechnikbuch; Systemverordnung) and on recommendations of the Central Committee on Biological Safety (ZKBS). While Evercyte undertakes all reasonable measures to test for absence of a selected panel of known human pathogenic viruses, there is currently no test procedure available that guarantees for complete absence of infectious pathogens. The use of state-of-the art infectious virus assays or viral antigen assays may leave open the possible existence of a latent viral genome, even if a negative test result is obtained. Therefore, we recommend that all human cell lines should be handled with caution such as an organism of ACDP Hazard Group 2. People who work with our cells must follow national regulations and safety precautions. The laboratories must be equipped with a security level according to the classification of the cells / products. Evercyte assumes no liability whatsoever in connection with the receipt, handling or the consequences of improper use of our products.

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