VERO XerumFreeTM

Subject: Vero cells in XerumFree™

The Vero cell strain used in the following experiments comes from a flask of VERO IM 153 on the 153th passage acquired from the ATCC. This strain was divided into two sub-lines, one propagated in Fetal Bovine Serum (FBS) - supplemented medium and the other sub-line proliferating in XerumFree™-supplemented serum-free medium.



TNC BIO BV

High Tech Campus 1E 5656 AE Eindhoven The Netherlands

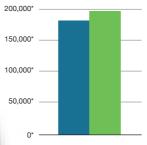
T +31 4030 400 80 info@tncbio.com www.tncbio.com

Evaluation of growth in serum-supplemented versus XerumFree™-supplemented medium.

This study was performed with Vero cells adapted over long-term culture in serum-free, XerumFreeTM-supplemented medium. Growth dynamics were compared to those of the sub-line growing on FBS-supplemented medium. The result are from a 6-day culture period in T25 flasks. Cell numbers were determined at the end of the 144 hour culture period.

Medium	Seeding cell density (per cm²)	Final cell den- sity (per cm²)	Cell Multipli- cation Index
Williams Medium E + 10% FBS	20,000	184,000	9.20
Williams Medium E + 10% XerumFree™	20,000	197,000	9.85





FBS-supplemented
XerumFree[™]-suplemented
*number of cells per cm²

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Growth of Vero cells in XerumFree[™]-supplemented medium on microcarriers.

In this study a Vero strain adapted since 3 passages to serum-free growth in XerumFreeTM-supplemented Williams Medium E was grown on microcarriers (200 mg cytodex / 100 ml corresponding to 1200 cm2 growth area) in small scale laboratory bioreactors. To test out potential positive effects of insulin, this hormone was added to the culture medium (1.25 mg/l) in one group from day 0 through day 4, after which the medium was switched back to Williams E + XerumFreeTM alone.

As can be seen, in both conditions the Vero cells showed a constant growth over the whole experimental period. The addition of insulin during the initial growth phase (4 days) caused a growth enhancement during the logarithmic growth phase, albeit the two experimental groups showed only a slight difference (< 10%) in the final cell numbers (< 10%). These results may indicate that a short mitogenic stimulus by insulin during the initial growth phase may be sufficient to generate a sustained growth benefit over the whole batch culture period.

