# Differentiation Protocol

**Cat. T0756**

**Immortalized Human Skeletal Myoblasts (LHCN-M2)**

Culture conditions recommended for the myogenic differentiation of Immortalized Human Skeletal Myoblasts (LHCN-M2):

Mix 4:1 PriGrow III (TM003) and PriGrow I (TM001), then supplement with 0.5% heat-inactivated FBS + 0.02 M HEPES [pH 7.4] (TM058) + 0.03 µg/mL Zinc sulfate heptahydrate + 1.4 µg/mL vitamin B12 + 10µg/mL insulin + 100µg/mL apo-transferrin + 1% Penicillin/Streptomycin Solution.

Note: cells must be grown using the regular culture conditions to a 70% subconfluent density prior to starvation by switching to the low-serum differentiation medium above. Differentiated cells change from a fibroblast-like morphology to a fusiform, myotube-like morphology resulting in the formation of multinucleated syncytia visible at days 4 and 7 in DM.

This protocol has been adapted from the publication: Vitucci, D., Imperlini, E., Arcone, R., Alfieri, A., Canciello, A., Russomando, L., Martone, D., Cola, A., Labruna, G., Orrù, S., Tafuri, D., Mancini, A., & Buono, P. (2018). Serum from differently exercised subjects induces myogenic differentiation in LHCN-M2 human myoblasts. *Journal of sports sciences*, *36*(14), 1630–1639. https://doi.org/10.1080/02640414.2017.1407232. **abm does not warrant the accuracy of such information; all protocols must be experimentally tested by the end-user.**

Updated on February 9, 2024