

# MesenCult™ Osteogenic Stimulatory Kit (for MSCs Cultured in MesenCult™-XF)



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Catalog #05434

100 mL

## Product Description

MesenCult™ Osteogenic Stimulatory Kit (for MSCs cultured in MesenCult™-XF) is specifically formulated for the in vitro differentiation of human mesenchymal stem cells (MSCs) previously cultured in MesenCult™-XF Medium (Catalog #05420) into osteogenic progenitor cells.

## Product Information

The following components are sold as a complete kit (Catalog #05434) and are not available for individual sale.

COMPONENT NAME	COMPONENT #	SIZE	STORAGE	SHELF LIFE
MesenCult™ MSC Basal Medium (Human)	05431	95 mL	Store at 2 - 8°C.	Stable for 12 months from date of manufacture (MFG) on label.
Osteogenic Stimulatory Supplement for XF	05435	5 mL	Store at -20°C.	Stable until expiry date (EXP) on label.
β-Glycerophosphate (1 M)	05436	5 mL	Store at -20°C.	Stable until expiry date (EXP) on label.

## Preparation of Complete MesenCult™ Osteogenic Medium (for MSCs Cultured in MesenCult™-XF)

Use sterile techniques to prepare complete MesenCult™ Osteogenic Medium (Basal Medium + Stimulatory Supplement + β-Glycerophosphate). The following example is for preparing 50 mL of complete medium. If preparing other volumes, adjust accordingly.

1. Thaw Osteogenic Stimulatory Supplement for XF at room temperature (15 - 25°C) for 30 minutes - 1 hour or overnight at 2 - 8°C. Thaw β-Glycerophosphate in a 37°C water bath. Mix thoroughly.  
NOTE: Once thawed, use Supplement and β-Glycerophosphate immediately or aliquot into 2.5 mL volumes and store at -20°C. Once aliquots are thawed, do not re-freeze.
2. Mix 47.5 mL of MesenCult™ MSC Basal Medium (Human) with 2.5 mL of Osteogenic Stimulatory Supplement for XF.  
NOTE: If not used immediately, store Basal Medium + Stimulatory Supplement at 2 - 8°C for up to 1 month.
3. Add 175 μL of β-Glycerophosphate fresh before use (final concentration 3.5 mM).  
NOTE: Antibiotics and anti-mycotics may be added if desired.

## Directions for Use

1. Culture human MSCs in MesenCult™-XF according to the Technical Manual: Culture of Human Mesenchymal Stem Cells Using MesenCult™-XF Medium (Document #29184), available at [www.stemcell.com](http://www.stemcell.com) or contact us to request a copy.  
NOTE: Use MSCs at passage 2 or higher for differentiation to ensure high purity of MSCs.
2. When the cells reach 70 - 80% confluence, remove medium and replace with complete MesenCult™ Osteogenic Medium.
3. Change medium every 3 - 4 days until mineralization occurs (this will take approximately 12 - 18 days).
4. Osteogenic cells may be detected by Alizarin Red S staining to indicate Ca<sup>++</sup> deposits (which indicates the formation of bone structures).

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