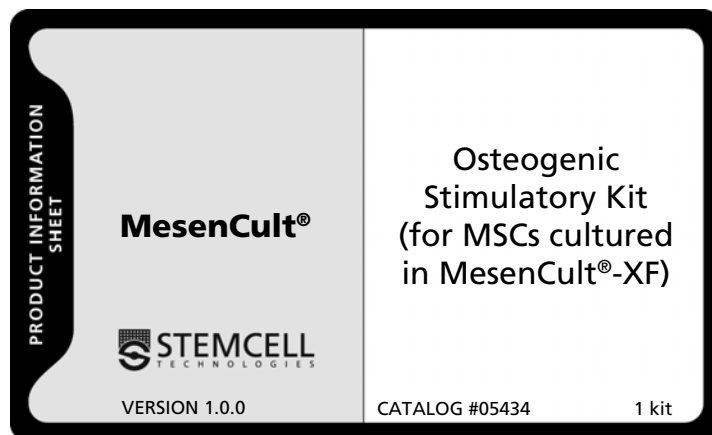


## PRODUCT DESCRIPTION

The Osteogenic Stimulatory Kit (for MSCs cultured in MesenCult<sup>®</sup>-XF) is specifically formulated for the *in vitro* differentiation of human mesenchymal stem cells previously cultured in MesenCult<sup>®</sup>-XF (Catalog #05420) into osteogenic progenitors.



## COMPONENTS

This kit contains serum and proprietary supplements pretested and selected for the ability to optimally differentiate human mesenchymal stem cells previously cultured in MesenCult<sup>®</sup>-XF (Catalog #05420) into osteogenic progenitors in culture.

This product is a biological reagent and cannot be completely characterized or quantified. Some variability is unavoidable.

Components have been aseptically manufactured using tightly controlled processes and are sterility tested.

**Table 1. Component storage, stability and usage.**

CATALOG #	PRODUCT NAME	UNIT SIZE	STORAGE AND STABILITY
05431	MesenCult <sup>®</sup> MSC Basal Medium (Human)	95 mL	Stable at 2 - 8°C for 1 year from date of manufacture as indicated on label.
05435	Osteogenic Stimulatory Supplement (Human)	5 mL	Stable at -20°C until expiry date as indicated on label.
05436	β-Glycerophosphate (1M)	5 mL	Stable at -20°C until expiry date as indicated on label.

## DIRECTIONS FOR USE

### Preparation of Complete MesenCult<sup>®</sup> Osteogenic Medium (for MSCs cultured in MesenCult<sup>®</sup>-XF):

Once MesenCult<sup>®</sup> MSC Basal Medium (Human) has been mixed with Osteogenic Stimulatory Supplement (Human), the medium is stable at 2 - 8 °C for 1 month. β-Glycerophosphate should be added fresh before each use.

To prepare 50 mL Complete MesenCult<sup>®</sup> Osteogenic Medium (for MSCs cultured in MesenCult<sup>®</sup>-XF) mix the following:

- 47.5 mL MesenCult<sup>®</sup> MSC Basal Medium (Human)
- 2.5 mL Osteogenic Stimulatory Supplement (Human) (final concentration is 5%)
- 175 μL 1M β-Glycerophosphate (final concentration is 3.5 mM)

Antibiotics and anti-mycotics may be added at the researchers' discretion.

### Culture procedure:

For complete instructions on culturing human MSCs in MesenCult<sup>®</sup>-XF, refer to the Technical Manual for Enumeration and Expansion of Human Mesenchymal Stem Cells using MesenCult<sup>®</sup>-XF Medium (Manual Catalog #29184) available on our website at [www.stemcell.com](http://www.stemcell.com) or contact us to request a copy.

1. It is recommended to use MSCs at passage 2 or higher for differentiation, to ensure high purity of MSCs.
2. Culture human MSCs in MesenCult<sup>®</sup>-XF according to the technical manual.
3. When the cells reach 70 - 80% confluence, remove medium and replace with Complete MesenCult<sup>®</sup> Osteogenic Medium (for MSCs cultured in MesenCult<sup>®</sup>-XF).
4. Change medium every 3 - 4 days until mineralization occurs (will take approximately 12 - 18 days).
5. Osteogenic cells may be detected by Alizarin Red staining to indicate Ca<sup>++</sup> deposits (which indicates the formation of bone structures).