

# ENRICHMENT OF MESENCHYMAL STEM CELLS FROM BONE MARROW

Bone Marrow derived mesenchymal stem cells (BM-MSCs) are one of the most well-studied stem cells population for their unique characteristics and therapeutic potential. BM-MSCs are normally isolated by adherence, but one of the disadvantages is the non-specificity of this approach. MSCs are a rare fraction and many other cell types attach to the plate affecting the stem cell culture.

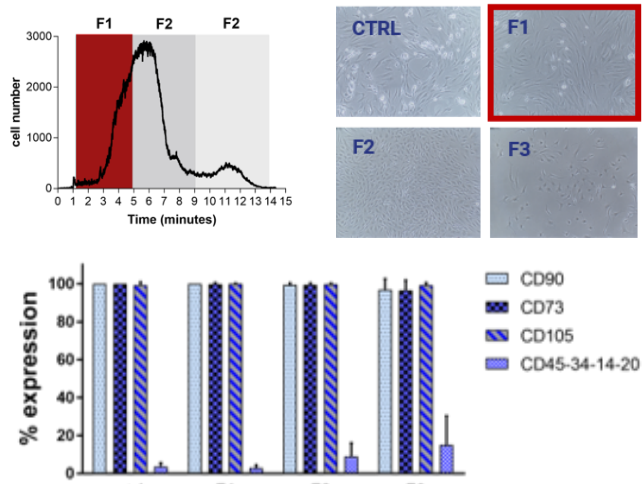
Prolonged culture is necessary to obtain a pure MSCs population, with consequent aging and possible modification of the cells due to contact with other cell types.

Selector® **concentrates MSCs** from fresh Bone Marrow with **high purity and viability**.

## 1 What it does

Selector® profile shows:  
**High reproducibility** between individuals;  
**Sterility** and **viability** maintained.

**Enrichment of BM-MSCs** from fresh Bone Marrow concentrate in **F1**.



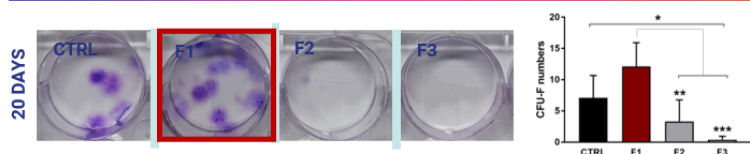
## 2 Biological Features

**No differences** among fractions in mesenchymal phenotype.

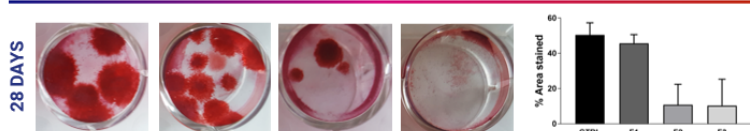
**F1 cells show higher clonogenic ability and differentiation** toward osteogenic lineage compared to F2 and F3 cells.

**Depletion** of red blood cells, differentiated cells and monocytes, resulting in a homogeneous mesenchymal stem cell culture.

### CFU-F



### Differentiation



## 3 Applications

**Enrichment** of Mesenchymal Stem Cells from clinical Bone Marrow samples;  
**Depletion** of red blood cells and monocytes from the raw sample;

**Quality control (QC)** of clinical sample;  
 Isolation of BM-MSCs for **regenerative medicine and tissue repair studies**