

# ISOLATE AND CULTURE

R&D Systems offers a variety of products to establish, maintain, and expand a homogenous population of mesenchymal stem cells (MSCs), including expansion media, recombinant proteins, MSC isolation kits, cryopreservation media, and more.

## Proteins for MSC Expansion and Differentiation

- **High Bioactivity:** R&D Systems® proteins are known for their industry-leading bioactivity
- **Consistent:** tested for lot-to-lot consistency

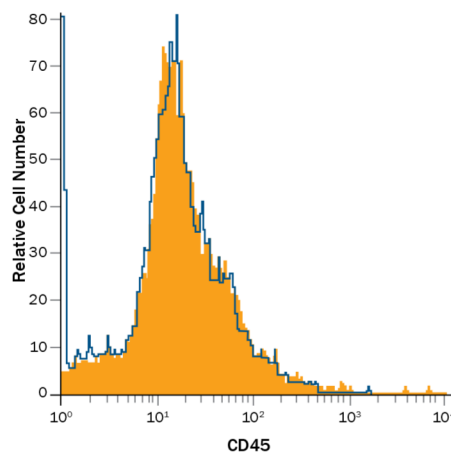
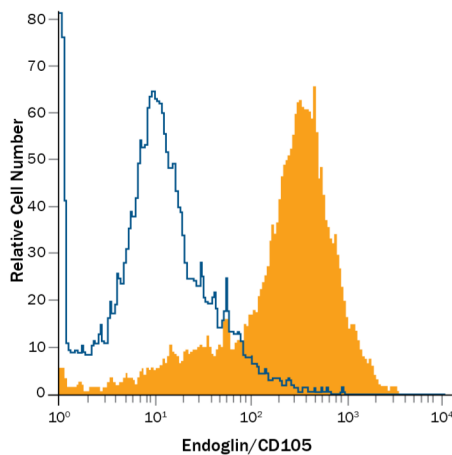
Recombinant Protein	Catalog #		
	Human	Mouse	Rat
BMP-2	355-BM	355-BM	355-BM
BMP-4	314-BP	5020-BP	
BMP-6	507-BP	6325-BM	
EGF	236-EG	2028-EG	3214-EG
FGF basic	233-FB	3139-FB	3339-FB
FGF-4	235-F4	5846-F4	
GDF-5/BMP-14	8340-G5	853-G5	
HB-EGF	259-HE		
IGF-1	291-G1	791-MG	4326-RG

Recombinant Protein	Catalog #		
	Human	Mouse	Rat
IL-6	7270-IL	406-ML	506-RL
LR3 IGF-1	8335-G1		
PDGF-BB	220-BB		520-BB
TGF-β1	7754-BH	7666-BH	
TGF-β2	302-B2	7346-B2	
TGF-β3	8420-B3		
Wnt-10b	7196-WN	2110-WN	
Wnt-4	6076-WN	475-WN	
Wnt-5b	7347-WN	3006-WN	

## Media for MSC Expansion

- **Reliable:** StemXVivo® media for MSCs are specifically designed for optimal expansion
- **Consistent:** tested for lot-to-lot consistency
- **Flexible:** available as xeno-free, serum-free, or serum-containing media

Product	Description	Catalog #
StemXVivo® Mesenchymal Stem Cell Expansion Media	Media for human, mouse, and rat MSCs	CCM004
StemXVivo® GMP Human MSC Expansion Media	GMP-grade media for human MSC expansion	CCM026 <b>NEW!</b>
StemXVivo® Xeno-Free Human MSC Expansion Media	Free of non-human animal-derived components	CCM021
StemXVivo® Serum-Free Human MSC Expansion Media	Serum free expansion media	CCM014



**Phenotypic Analysis of Human MSCs Expanded in StemXVivo® MSC Expansion Media.** Human MSCs were expanded using StemXVivo® Mesenchymal Stem Cell Expansion Media (Catalog # CCM004). Filled histograms indicate cells stained with markers of undifferentiated MSCs including PE-conjugated Mouse Anti-Human Endoglin/CD105 Monoclonal Antibody (Catalog # FAB10971P) or PE-conjugated Mouse Anti-Human CD45 Monoclonal Antibody (Catalog # FAB1430). The open histograms show isotype-matched control staining. MSCs appropriately lack expression of CD45.