

**Table 1. Cell labeling**

Markers	Function	Antibody
1. CSC epitopes		
c-kit	Stem cell factor receptor	conjugated primary Ab
MDR1	ABC cassette transporter	conjugated primary Ab
Sca-1	Adhesion molecule	conjugated primary Ab
2. Transcription factors of cardiac cell lineages		
GATA-4	Differentiation of cardiac cells	conjugated primary Ab
MEF2C	Differentiation of cardiomyocytes	conjugated primary Ab
GATA-5	Regulator of Nkx2.5	conjugated primary Ab
GATA-6	Differentiation of VSMCs	conjugated primary Ab
Ets1	Differentiation of ECs	conjugated primary Ab
3. Structural proteins of cardiac cell lineages		
Nestin	Intermediate filament of immature cells	primary/secondary Ab
Desmin	Intermediate filament of muscle cells	primary/secondary Ab
$\alpha$ -sarcomeric actin	Contractile protein of cardiomyocytes	primary/secondary Ab
Cardiac myosin	Contractile protein of cardiomyocytes	primary/secondary Ab
Connexin 43	Electrical coupling	primary/secondary Ab
N-cadherin	Mechanical coupling	primary/secondary Ab
$\alpha$ -SM actin	Contractile protein of VSMCs	primary/secondary Ab
TGF $\beta$ 1 receptor	VSMC receptor	primary/secondary Ab
flk1	VEGF2 receptor in	primary/secondary Ab

Markers	Function	Antibody
	ECs	
Von Willebrand factor	Factor VIII receptor in ECs	primary/secondary Ab
Vimentin	Intermediate filament in ECs and Fs	primary/secondary Ab
4. Junctional proteins		
Connexin 45	Electrical coupling	primary/secondary Ab
N-cadherin	Mechanical coupling	primary/secondary Ab
5. Integrin receptors and extracellular ligands		
$\alpha_4$ -integrin	ECM receptor	primary/secondary Ab
$\beta_1$ -integrin	ECM receptor	primary/secondary Ab
$\alpha_2$ -laminin	ECM protein	primary/secondary Ab
Laminin-8/9	ECM protein	primary/secondary Ab
Laminin-10/11	ECM protein	primary/secondary Ab
Fibronectin	ECM protein	primary/secondary Ab
6. Proliferation and symmetric and asymmetric division		
BrdU	S phase marker	primary/secondary Ab
MCM5	cell cycle protein	primary/secondary Ab
Phosphohistone-H3	progression of mitosis	primary/secondary Ab
Numb	endocytic protein	primary/secondary Ab
$\alpha$ -adaptin	endocytic protein	primary/secondary Ab
7. Hematopoietic markers		
GATA-1	Differentiation of blood cells	conjugated primary Ab
GATA-2	Differentiation of blood cells	conjugated primary Ab
CD34	HSC/EC antigen	conjugated primary Ab
CD45	Pan-myeloid marker	conjugated primary Ab
CD45RO	T lymphocyte subset marker	conjugated primary Ab
CD8	T lymphocyte subset marker	conjugated primary Ab

Markers	Function	Antibody
CD20	B lymphocyte marker	conjugated primary Ab
TER-119	Erythroid marker	conjugated primary Ab
8. Neural cell markers		
MAP1b	N-specific microtubule protein	conjugated primary Ab
NF200	neurofilament protein	conjugated primary Ab
GFAP	mature glial marker	conjugated primary Ab
9. Skeletal muscle markers		
MyoD	SKMC differentiation	conjugated primary Ab
Myogenin	SKMC differentiation	conjugated primary Ab
Myf5	SKMC differentiation	conjugated primary Ab

CSC, cardiac stem cell; VSMC, vascular smooth muscle cell; EC, endothelial cell; Fs: fibroblasts; ECM, extracellular matrix; HSC, hematopoietic stem cell; N, neuron; SKMC, skeletal muscle cell; Ab, antibody.

Sources of antibodies: AG Scientific (San Diego),  $\alpha_2$ -laminin; Cedarlane Laboratories, Sca-1; Chemicon, MDR1, and cardiac myosin; DAKO, c-kit, CD45, CD45RO, and CD8; Developmental Studies Hybridoma Bank, nestin; Pharmingen,  $\alpha_4$ -integrin,  $\beta_1$ -integrin, and TER-119; Roche, BrdU; Santa Cruz Biotechnology, GATA-4, MEF2C, GATA-5, GATA-6, Ets1, N-cadherin, TGF $\beta$ 1 receptor, flk1, connexin 45, E-cadherin, laminin-8/9, laminin-10/11, fibronectin, MCM5, Numb, adaptin, GATA-1, GATA-2, CD34, CD20, MyoD, myogenin, and Myf5; Sigma, desmin,  $\alpha$ -sarcomeric actin, connexin 43,  $\alpha$ -smooth muscle actin, von Willebrand factor, vimentin, MAP1b, NF200, and GFAP; Upstate Biotechnology (Lake Placid, NY), phosphohistone-H3.