

Table S2. Genes expressed selectively by PMCs

A) mRNAs restricted to the Micromere-PMC lineage

Gene	Protein	Glean model	Reference
Transcription factors			
<i>alx1</i>	Homeodomain protein	22817/25302	Ettensohn et al., 2003
<i>pmar1</i>	Homeodomain protein	14721	Oliveri et al., 2002
<i>tbr</i>	T-box protein	25584	Fuchikami et al., 2002
Biomineralization genes			
<i>can1</i>	Carbonic anhydrase (secreted)	12518	Livingston et al., 2006
<i>Clectin</i>	Spicule matrix protein	07882	Illies et al., 2002
<i>msp130</i>	Novel cell surface protein	02088/13821	Leaf et al., 1987
<i>msp130rel1</i>	Novel cell surface protein	13822	Illies et al., 2002
<i>msp130rel2</i>	Novel cell surface protein	16506	Illies et al., 2002
<i>msp130rel3</i>	Novel cell surface protein	13823	Livingston et al., 2006
<i>msp130rel5</i>	Novel cell surface protein	15763	Livingston et al., 2006
<i>p16</i>	Novel transmembrane protein	18408	Cheers and Ettensohn, 2005
<i>p16rel1</i>	Novel transmembrane protein	18403	Livingston et al., 2006
<i>p16rel2</i>	Novel transmembrane protein	18407	Livingston et al., 2006
<i>p19</i>	Novel cytoplasmic protein	04136	Illies et al., 2002
<i>sm20</i>	Spicule matrix protein	05991	Livingston et al., 2006; this work
<i>sm21</i>	Spicule matrix protein	05989	Livingston et al., 2006
<i>sm27(pm27)</i>	Spicule matrix protein	28945	Harkey et al., 1995
<i>sm29</i>	Spicule matrix protein	05990	Illies et al., 2002
<i>sm30A</i>	Spicule matrix protein	00825	Livingston et al., 2006
<i>sm30B</i>	Spicule matrix protein	00826	George et al., 1991
<i>sm30C</i>	Spicule matrix protein	00827	Akasaka et al., 1994
<i>sm30E</i>	Spicule matrix protein	04867	Livingston et al., 2006
<i>sm30F</i>	Spicule matrix protein	04869	Killian et al., 2010
<i>sm37</i>	Spicule matrix protein	18813	Lee et al., 1999
<i>sm49</i>	Spicule matrix protein	27906	Livingston et al., 2006; this work
<i>sm50</i>	Spicule matrix protein	18810/18811	Benson et al., 1987
Signaling proteins			
<i>fgfr2</i>	Receptor tyrosine kinase	04746/04747	Rottinger et al., 2007
<i>vegfr-lg-10</i>	Receptor tyrosine kinase	00310	Duloquin et al., 2007
Secreted/ECM proteins			
<i>egf-rich/p41</i>	Matrilyn/EGF domains	14065/19344	This work
<i>frp (=ficolin)</i>	Fibrinogen domain	22598	Zhu et al., 2001
Membrane proteins			
<i>net7</i>	Tetraspanin	25068	Zhu et al., 2001
<i>p58A</i>	Novel	00439	This work
<i>p58B</i>	Novel	00438	This work
<i>p133</i>	Laminin/EGF domains	15404	This work
<i>stomatin</i>	Slipin family protein	14562-8	This work
Other			
<i>casc1</i>	Novel	03551/22570	This work
<i>ctd</i>	Phosphatase	19434	This work
<i>cyp2</i>	Peptidylprolyl cis-trans isomerase	07944/25210	Livingston et al., 2006
<i>pks2</i>	Polyketide synthase	28395	This work
Cytoskeletal proteins			
<i>lasp1</i>	LIM/nebulin/SH3 domains	09123/09124	This work
B) mRNAs enriched in the micromere-PMC lineage			
Gene	Protein	Glean model	Reference
Transcription factors			
<i>alx4</i>	Homeodomain protein	22816/25302	This work
<i>dri</i>	ARID protein	05718/17106/25601	Amore et al., 2003
<i>erg</i>	ETS protein	18483	Zhu et al., 2001
<i>ets1/2</i>	ETS protein	02874	Kurokawa et al., 1999
<i>fos</i>	Basic zipper protein	21172/3	This work
<i>foxB</i>	Forkhead protein	04551	Minokawa et al., 2004
<i>foxN2/3</i>	Forkhead protein	15243	Tu et al., 2006
<i>foxO</i>	Forkhead protein	09178/28698	Tu et al., 2006

<i>hex</i>	Homeodomain protein	27215	Howard-Ashby et al., 2006a
<i>jun</i>	Basic zipper protein	03102	Howard-Ashby et al., 2006b
<i>smad1/5/8</i>	MAD protein	20722/23107	This work
<i>snail</i>	Transcriptional repressor	01113	Wu and McClay, 2007
<i>tel</i>	ETS protein	08351/28479	Rizzo et al., 2006
<i>tgif</i>	Homeodomain protein	18126	Howard-Ashby et al., 2006a
Signaling proteins			
<i>delta</i>	Notch ligand	16128	Sweet et al., 2002
<i>fgfA</i>	RTK ligand	06242	Rottinger et al., 2007
<i>wnt8</i>	Frizzled/LRP6 ligand	20371	Wikramanayake et al., 2004
Secreted/ECM proteins			
<i>coll (colp3alpha)</i>	Collagen (non-fibrillar)	03768/05187	Angerer et al., 1988
<i>colp4alpha</i>	Collagen (non-fibrillar)	15708/27250	Suzuki et al., 1997
<i>fn3-rich</i>	Multiple FN3 repeats	10374	Zhu et al., 2001
<i>p11</i>	Novel, cysteine-rich protein	17737	This work
<i>tsp</i>	Thrombospondin domain	27284	This work
Cytoskeletal proteins and regulators			
<i>α-actinin</i>	Actin filament crosslinker	20920	This work
<i>arp1</i>	Centractin	01366	This work
<i>arp3</i>	Nucleator of actin filaments	10631	This work
<i>advillin</i>	Gelsolin family protein	01874	Love et al., 2007
<i>cdc42</i>	Rho family GTPase	19494	This work
<i>cofilin</i>	Actin binding protein	06172	This work
<i>profilin</i>	Actin monomer binding protein	20197	Smith et al., 1994
<i>p21-arc</i>	Arp2/3 complex, subunit C	18369	This work
<i>α-spectrin</i>	Actin filament crosslinker	11699	Wessel and Chen, 1993
<i>β-spectrin</i>	Actin filament crosslinker	07720	This work
<i>talin</i>	Integrin/actin linker	00241	This work
<i>wasp</i>	Regulator of Arp2/3 complex	03194	This work
Other			
<i>elav</i>	RNA binding protein	02324	This work
<i>calumenin</i>	EF-hand protein	18461/23466	This work
<i>cdi</i>	Ser/Arg rich	05856	This work
<i>cyp1</i>	Peptidylprolyl cis-trans isomerase	07484	Amore and Davidson, 2006; this work
<i>vigilin</i>	Multiple KH domains	16739	This work