Supplementary Figure 5. Embryo images from individual validation of eFS findings.

Representative images are shown for each cCRM report line tested. Fixed embryos were stained with antibodies to GFP and CD2 (expressed pan-mesodermally under the control of the *twi* promoter) as described in Online Methods and Supplementary Note 2. Images displayed here are Maximum Intensity Projections of structured illumination optical sections except where noted by an asterisk. Expanded views of informative regions are shown to the right; arrowheads highlight a GFP+CD2 coexpressing cell where such exist. Embryos shown are usually at or just before stage 11–12, except in the small minority of cases where no expression was visible at these stages and interesting patterned expression was seen in older embryos; in these cases (mid_30, cib_up_4, and nau_a_4) we display the later expression pattern. Tested cCRMs are displayed in the order in which they appear in Supplementary Table 4; complete descriptions of the pattern of detected GFP across embryogenesis in each line appear therein. Coexpression of GFP with CD2 (Supplementary Table 5) was evaluated in individual optical sections with the annotator being blind to the predicted activity of the cCRMs. Coexpression is observed as GFP and CD2 being present in the same cells, since the GFP in these embryos is nuclear, while CD2 is expressed on the cell surface (see Supplementary Note 2).

	GFP	CD2	merge	twi: CD2+	twi: - CD2-	Mef2-I-E _{D5} : CD2+	Mef2-I-E _[CD2-	₀₅: duf: CD2⊣	duf: ⊦ CD2-
CG7759_33				+	+	+	+	+	+
ChIPCRM3152				+	+	+	+	nd	nd
ChIPCRM2497				+	+	-	+	+	+
ChIPCRM2299	A CONTRACTOR			+	+	-	+	-	+
ChIPCRM2256*				 +	+	-	+	-	-
ChIPCRM2078	-			+	+	+	+	nd	nd
ChIPCRM2898				 +	+	-	+	+	+
CBP2862				+	-	-	-	+	+

	GFP	CD2	merge	twi: CD2-	twi: + CD2-	Mef2-I-E _D CD2+	;: Mef2-I-E CD2-	_{D5} : duf: CD2+	duf: CD2-
ChIPCRM2847				+	+	-	+	-	+
ChIPCRM3407	ter ter			+	-	-	+	-	+
ChIPCRM5523				+	-	-	+	-	+
CBP5467			N. C. MARK	+	+	-	+	-	+
ChIPCRM5556	- Company -	Constant and a second	to and the second	+	+	-	+	+	+
ChIPCRM3043				+	+	-	+	-	+
ChIPCRM 2947+2948	4			+	-	-	-	-	+
ChIPCRM5405			A Start	+	-	+	+	-	-

	GFP	CD2	merge		twi: CD2+	twi: ∣ ⊦ CD2- (Mef2-I-E _{D5} CD2+	: Mef2-I-E _D CD2-	5: duf: CD2	duf: + CD2-
ChIPCRM5432		8 9 9 9 9 9 9 9 9 9 9	The second		+	+	+	+	+	+
ChIPCRM2610					+	-	-	-	-	-
DHS_FC_33	19. 19.		Second Second		+	+	-	+	nd	-
ChIPCRM3429	and the second s		Contraction of the second		+	-	-	-	-	-
ChIPCRM5900	State Same				+	-	-	-	-	-
CBP5083				X Z	-	-	-	-	-	-

CBP1410

No expression (no image)



	GFP	CD2	merge		twi: CD2+	twi: Mo ⊦CD2-CI	ef2-I-E _{D5} : D2+	Mef2-I-E _D CD2-	;: duf: CD2+	duf: ⊦ CD2-
ChIPCRM3814*					-	-	-	-	-	-
ChIPCRM5806					-	-	-	+	-	-
ChIPCRM1831				i i	-	+	-	+	-	+
DHS_FC_23					-	-	-	-	-	-
ChIPCRM752					-	+	-	+	-	-
ChIPCRM5406*					-	+	-	-	-	-
ChIPCRM3427*		and a second second			-	+	-	-	-	-
ChIPCRM2162					-	+	-	-	-	-

	GFP	CD2	merge	twi: CD2+	twi: M CD2-C	ef2-I-E _{D5} : D2+	Mef2-I-E _C CD2-	₉₅ : duf: CD2-	duf: ⊦ CD2-
jumu_a_8				-	-	-	-	-	-
CG33316_15			r + + C + + + + + + + + + + + + + + + +	-	-	-	nd	-	-
ChIPCRM6146				-	-	-	-	nd	nd
ChIPCRM6885*		ALL		-	-	-	-	-	-
slou_Up_14			-Mining	-	-	-	+	-	-
CBP2861				-	+	-	+	-	+
ChIPCRM770		tree and the	ter Carlo	-	-	-	-	nd	nd
rst_8			to and the second secon	-	-	-	-	-	-

	GFP	CD2	merge	twi: CD2+	twi: I ⊦CD2-0	Mef2-I-E _{D5} : CD2+	: Mef2-I-E _D CD2-	₉₅ : duf: CD2	duf: + CD2-
eg_36*	#	- All Law		-	-	+	-	-	-
ChIPCRM5561				-	+	-	+	nd	+
ChIPCRM5439*			7.0.23	-	-	-	+	-	-
mid_30				-	-	-	-	nd	nd
ChIPCRM4222		******		-	+	+	+	-	-
ChIPCRM3899*			AN CLARKER CONTRACT	-	+	-	+	-	-
ChIPCRM4235				-	-	-	+	-	-
slou_Up_30*				-	+	-	-	-	-



CD2

merge

twi: twi: Mef2-I-E_{D5}: Mef2-I-E_{D5}: duf: duf: CD2+ CD2- CD2+ CD2- CD2+ CD2-

+

DHS_FCM_1 No expression (no image)

ChIPCRM5397		the spaces of	Contraction of the second seco	
ChIPCRM4236				
ChIPCRM1739			Contraction of the second seco	
DHS_FC_15	2.			***
ChIPCRM6845				
slou_Dn_9				
CG15319 down_1				



	GFP	CD2	merge	twi: CD2-	twi: + CD2-	Mef2-I-E _{D5} : CD2+	Mef2-I-E _{D5} CD2-	: duf: CD2+	duf: ⊦ CD2-
Sur_39				nd	-	-	nd	-	-
ChIPCRM5792				nd	nd	nd	nd	+	+
ChIPCRM2613			1.553.4444	nd	nd	nd	nd	+	+
ChIPCRM2000				 nd	nd	nd	nd	+	+
hth_3			8	nd	nd	nd	nd	+	+
mud_c_d*			The same	nd	nd	nd	nd	-	-
mud_c_d*		LABO G.	144000	nd	nd	nd	nd	-	-

No expression (no image) numb_34 nd nd nd nd



nd nd nd nd

	GFP	CD2	merge	tw CI	i: twi:)2+ CD2	Mef2-I-E _D - CD2+	₅ : Mef2-I-E _D CD2-	₅: duf: CD2·	duf: + CD2-
ChIPCRM4505	No expression (no image)			n	d nd	nd	nd	-	-
slou_Up_1				n	d nd	nd	nd	-	-
ChIPCRM3430	· · · · · · · · · · · · · · · · · · ·		Mary Lange and State	n	d nd	nd	nd	-	-
CG15319 down_7				n	d nd	nd	nd	-	-
Mef2_29				n	d nd	nd	nd	-	-
noc_6				n	d nd	nd	nd	-	-
slou_Dn_4			Ellerer and	n	d nd	nd	nd	-	-
CBP4280	68111			n	ל nd	nd	nd	-	-

	GFP	CD2	merge	1	wi: tv CD2+C	vi: Mef2-I-E D2-CD2+	E _{D5} : Mef2-I-E _D CD2-	5: duf: CD2	duf: + CD2-
CG13830_19	No expression (no image)			r	id n	d nd	nd	-	-
pnut_13				T T	id n	d nd	nd	-	+
ChIPCRM6084	and and the state of the second			r	ıd n	d nd	nd	-	-
ChIPCRM5617				r	ıd n	d nd	nd	-	-
ChIPCRM5857				r	id n	d nd	nd	-	+
ChIPCRM2929*		A CONTRACTOR	And Mar and A	r	id n	d nd	nd	-	-
sns_6				ſ	id n	d nd	nd	-	-
G-oalpha47A_5				r	id n	d nd	nd	-	-

	GFP	CD2	merge	twi: CD2	twi: + CD2-	Mef2-I-E _{D5} CD2+	: Mef2-I-E _D CD2-	₅: duf: CD2+	duf: ⊦ CD2-
slou_Up_5	No expression (no image)			nd	nd	nd	nd	-	-
ChIPCRM6679				nd	nd	nd	nd	-	-
ChIPCRM4231	· · · · · · · · · · · · · · · · · · ·			nd	nd	nd	nd	-	-
TyrR_33				nd	nd	nd	nd	-	-
slou_Dn_1		Strapping and the second	the second	nd	nd	nd	nd	-	-
CG2875_7*	6 Aller		Post and the second	nd	nd	nd	nd	-	-
mew_35				nd	nd	nd	nd	-	-
nau_Dn_2			Allerize	nd	nd	nd	nd	nd	-