

SUPPORTING INFORMATION.

TABLE S1. Affinity Purification and MS Results of PGRMC1 and PGRMC2.

Murine Protein	Human Input		
	PGRMC1 (n=2)	PGRMC2 (n=2)	Empty Vector ^a (n=2)
PPOX	11-28	7-12	2-7
	4-9	2-6	2-3
	11-24%	4-16%	7-9%
CPOX	0-9	10-15	5-10
	0-6	5-8	4-7
	0-14.2%	15-21%	12-23%
ALAS-2	0-2	0-2	0
	0-2	0-2	0
	0-4%	0-3.7%	0%
SUCLA2	11-44	9	0-2
	6-21	7-8	0-2
	13-40%	18-19%	0-7%
ABCB10	80-97	35-36	3-10
	17-28	14-15	2-6
	21-35%	19-21%	4-11%
ABCB7	106-190	22-36	0-4
	16-23	10	0-3
	12-21%	13-14%	0-6%
ADP/ATP translocase 1 slc25a4 (ANT1)	140-179	26-42	3-13
	15-18	13-16	2-4

	24-37%	27-30%	6-7%
ADP/ATP translocase 2 slc25a5 (ANT2)	126-399 17-22 32-36%	56-92 15-16 27-30%	9-13 4-7 12-13%
voltage dependent anion selective protein channel 2 (VDAC2)	27-37 7-12 25-40%	21-25 9 30-33%	0 0 0%
2-oxoglutarate/malate carrier slc25a11 (OCG)	29-55 9 22-25%	23-32 5-5 15-18%	0-2 0-2 0-8%
transferrin receptor protein 1 (TFRC)	11-16 7-12 10-13%	19-26 11-12 13%	0-2 0-2 0-3%
Metalloreductase steap3 (STEAP3)	0-6 0-6 0-13%	0-3 0-3 0-6%	0 0 0%

Data shown from top value to bottom as: spectral counts/unique peptides, percent sequence coverage.

^a data Empty vector interactions as previously reported ¹

Table S2. Affinity purification and MS results of FECH, PGMRC1 and PGRMC2 with higher stringency wash.

Murine Output	Human Input		
	FECH	PGRMC1	PGRMC2
FECH	867	113	193
	19	24	25
	83%	70%	70%
PGRMC1	62	150	0
	8	17	0
	57%	59%	0%
PGRMC2	20	0	0
	7	0	0
	54%	0%	0%

Data shown from top value to bottom as: spectral counts/unique peptides, percent sequence coverage.

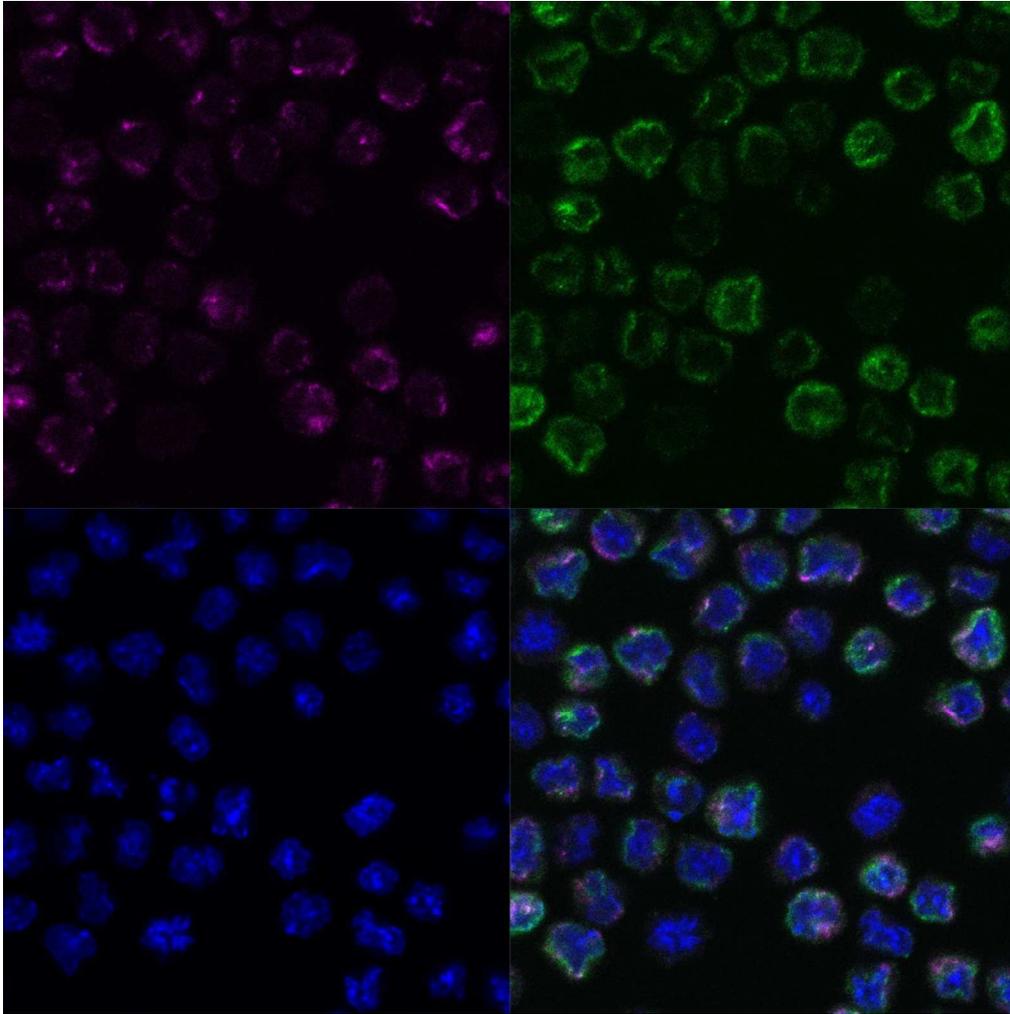


Figure S1. Mitochondrial localization of PGRMC1 in undifferentiated MEL cells. Top left, Detection of TIM23 with mouse Anti-TIM23 and Alexa Fluor 633 Anti-mouse, Top right, Detection of PGMRC1 with rabbit Anti-PGRMC1 and Alexa Fluor 488 Anti-rabbit, Bottom left, DAPI staining of cells, Bottom right, merged image showing some colocalization of TIM23 and PGRMC1 around cell nuclei. Magnification of cells 100x.

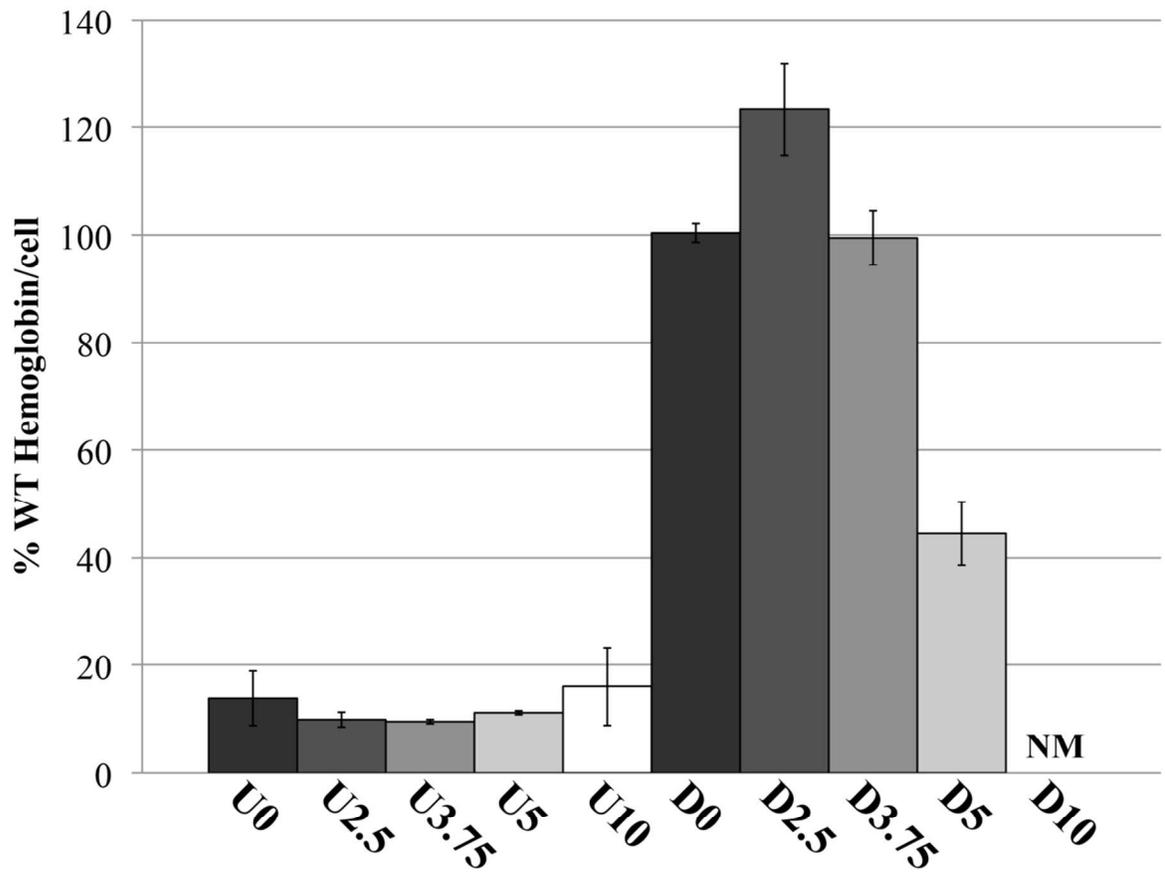


Figure S2. Inhibition of heme synthesis in K562 cells by AG-205. AG-205 inhibits heme synthesis in differentiating (D) K562 cells, but not undifferentiated (U) cells. Concentrations of AG-205 were 0, 2.5, 3.75, 5 and 10 μ M. NM is not measurable.

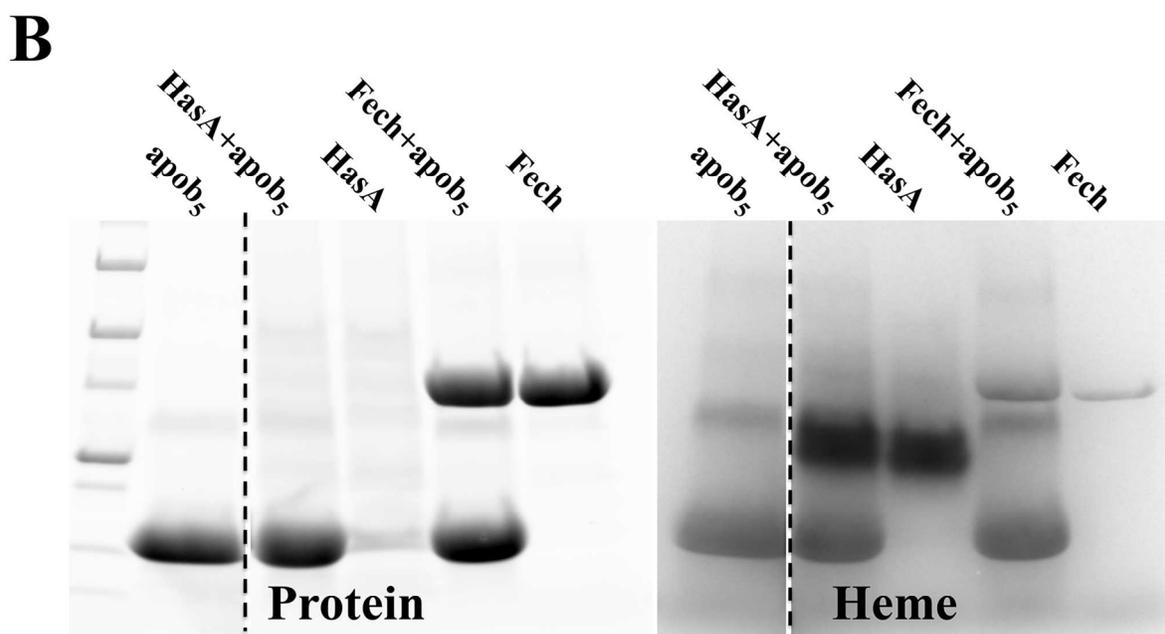
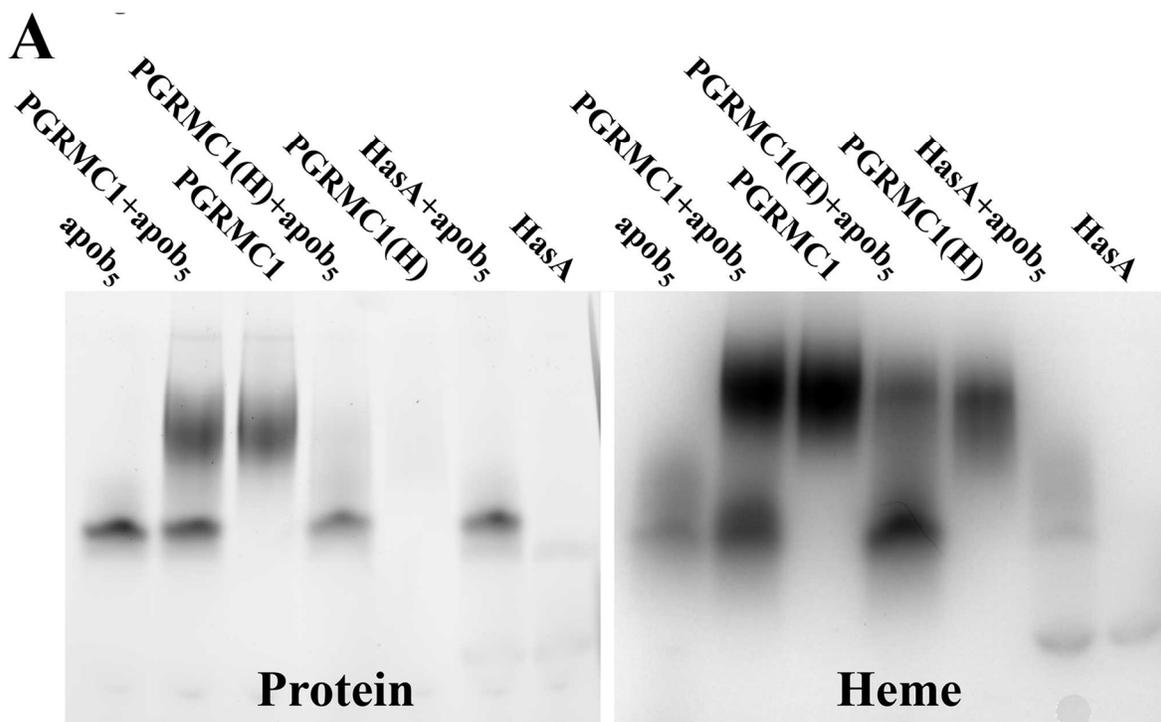


Figure S3. Heme transfer to apo-cytochrome b₅. A, Native PAGE of proteins alone or in combination of apo-cytochrome b₅ (apob₅), PGRMC1, PGRMC1 with heme added (PGRMC1H) and HasA detected for protein (left) and heme (right). B, SDS PAGE of protein combinations of apo-cytochrome b₅ (apob₅), HasA and FECH detected for protein (left) and heme (right).