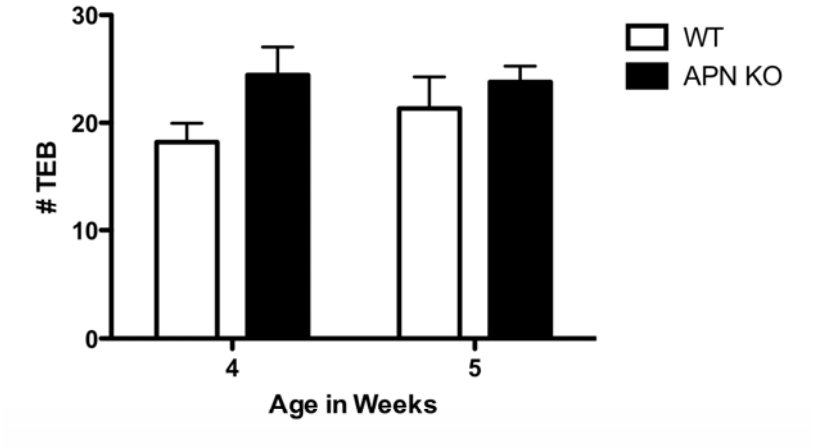
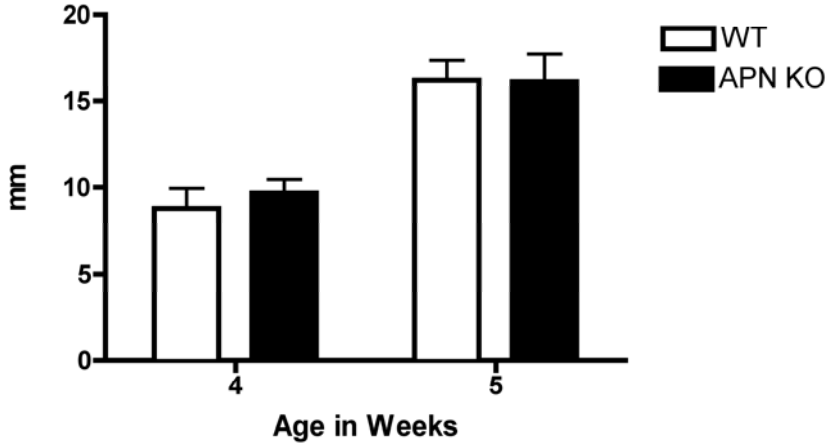
Supplement Data:
Figure S1:

A.



B.



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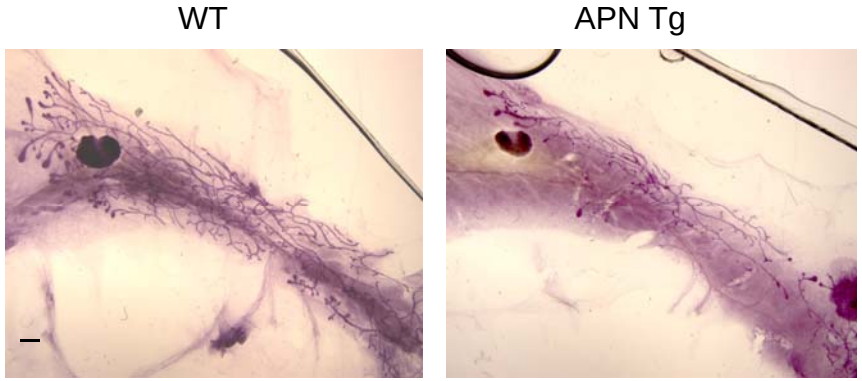

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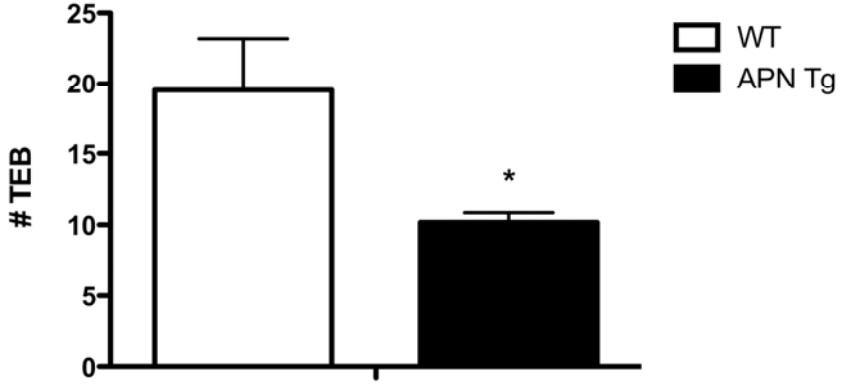
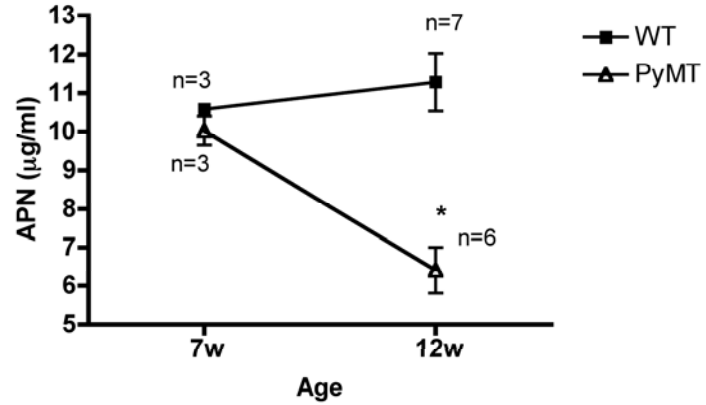


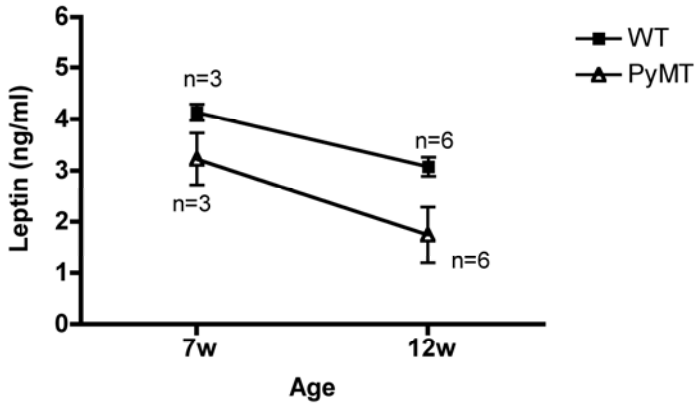
Figure S2:

A.

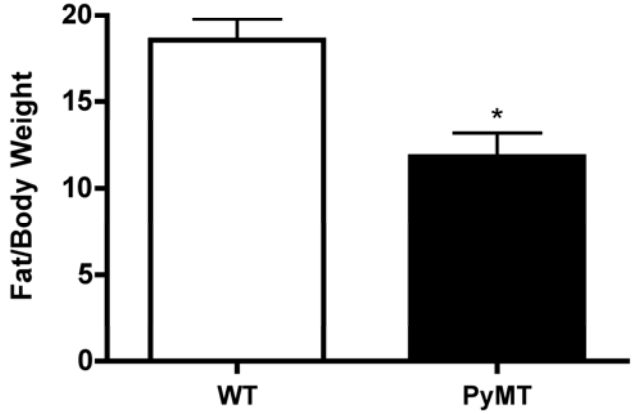
a)



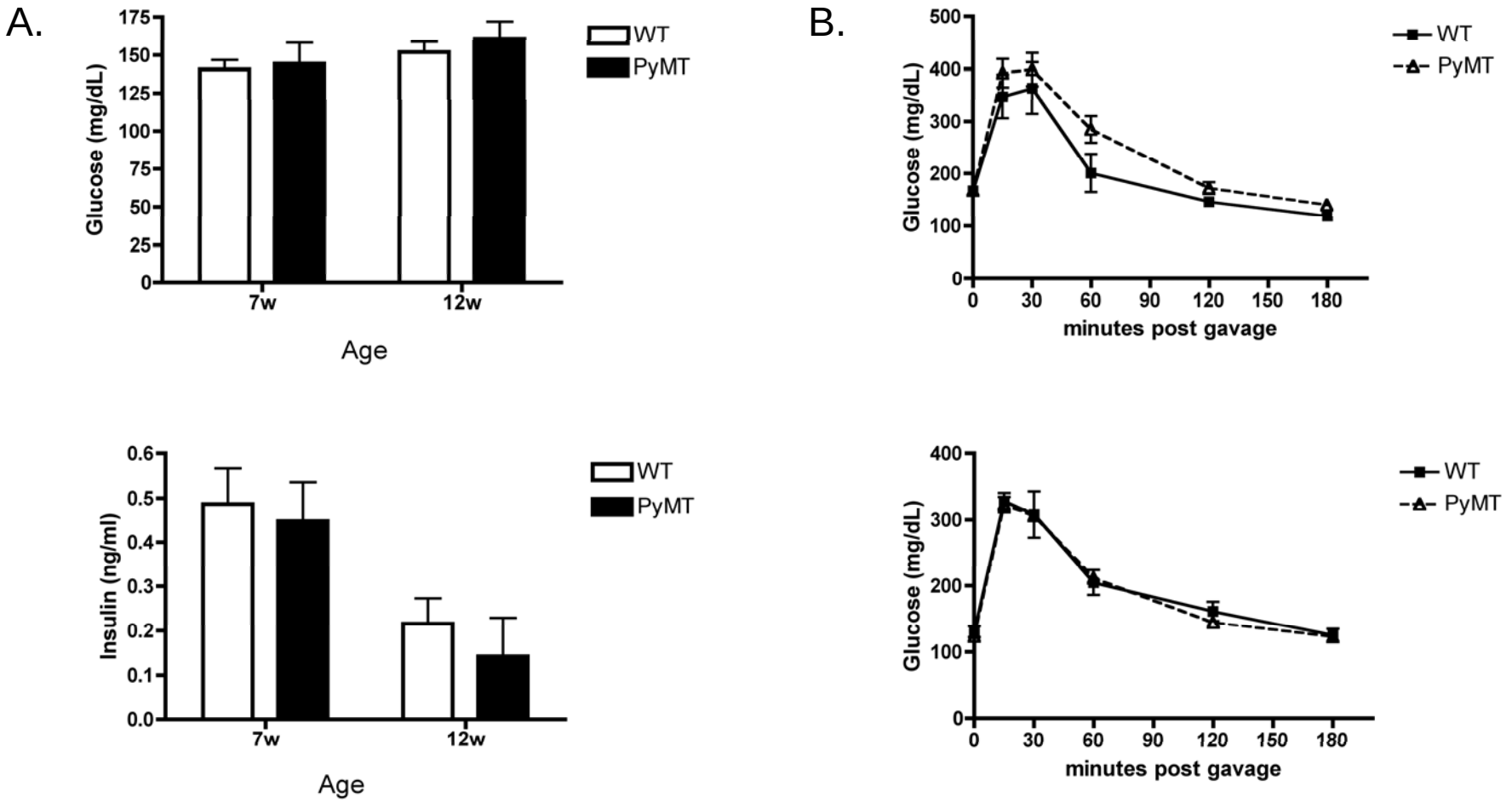
b)



B.



Supplement Data:
Figure S3:



Supplement Data:
Figure S4:

RT-PCR primer Sequences:

Actin	Forward:	5’ TACCACAGGCATTGTGATGG 3’
	Reverse:	5’ TTTGATGTCACGCACGATTT 3’
CD31	Forward:	5’ ATGACCCAGCAACATTCACA 3’
	Reverse:	5’ CGACAGGATGGAAATCACAA 3’
vWF	Forward:	5’ TGCTTCTTACGCCCATCTCT 3’
	Reverse:	5’ CAGCTGCCTTCCAGAAAAAC 3’
VEGF-A	Forward:	5’ GGAGATCCTTCGAGGAGCACTT 3’
	Reverse:	5’ GGCGATTTAGCAGCAGATATAAGAA 3’
VEGFR-1	Forward:	5’GAGGAGGATGAGGGTGTCTATAGGT 3’
	Reverse:	5’ GTGATCAGCTCCAGGTTTGACTT 3’
VEGFR-2	Forward:	5’ TGCCTACCTCACCTGTTTCC 3’
	Reverse:	5’ AAGGACCATCCCACTGTCTG 3’

Supplemental Figure 1: *APN KO mice display normal mammary development in contrast to APN transgenic mice*. Comparison of average number of TEB per inguinal mammary gland **(A)** or average ductal length **(B)** in whole mounts of age matched WT and APN KO mice indicated that APN is dispensable for normal mammary development. **C)** Representative whole-mount preparations of inguinal mammary glands of WT or APN Tg littermates reveals abnormal mammary development in which the ducts are underdeveloped. **D)** Comparison of average TEB number in WT and APN Tg mice. A-B n=6/per group, C-D n=4/per group, ±SEM, *p<0.05. Scale bar 1mm.

Supplemental Figure 2: *Circulating APN levels are down regulated during tumor expansion.* **A)** PyMT demonstrate a 44% reduction in APN circulating levels at advance stages of tumorigenesis compared to its WT littermates. Circulating leptin levels are decreased in both groups as a function of age independent of tumor presence. Shown is a representative assay. (Statistical analysis: 2-way ANOVA test ±SEM, *p<0.001). **B)** Body fat composition of 13 weeks old mice as determined by magnetic resonance imaging. (±SEM, *p<0.01, n=5-6 mice/ per group).

Supplemental Figure 3: *Metabolic profile of* PyMT *mice.* **A)** Circulating glucose (upper panel) and insulin levels (lower panel) were measured after 3hrs of fasting (n=3-8/per group) with no significant difference between the two groups. **B)** An oral glucose tolerance test was carried for both PyMT and WT mice at 7weeks (upper panel) (n=3-4/per group) and 12weeks of age (lower panel) (n=5-6/per group). A representative assay

is shown here. No significant difference in glucose clearance was observed between the PyMT and WT mice.

Supplemental Figure 4: *RT-PCR primer sequence.*