

Supplemental Figure 1: RP782 microSPECT/CT imaging of MMP activation in atherosclerosis in an apoE^{-/-} mouse fed a high fat diet for 3 months. A) Transversal (top row) and coronal (bottom row) SPECT (right column) and CT angiography (left column) images demonstrating tracer uptake in the aorta (blue arrows). cpv: counts per voxel

Supplemental Figure 2: Example of RP782 autoradiography and corresponding Oil Red O staining to identify atherosclerotic lesions. Red arrows point to atherosclerotic plaque areas with tracer uptake. The green arrow points to a plaque area devoid of tracer uptake.

Supplemental Figure 3: Mean microSPECT-derived RP782 uptake on serial 2 mm-segments of the aorta of mice fed a high fat diet for 1 (n=8), 2 (n=8) or 3 (n=4) months demonstrating gradual increase in tracer uptake over time, p<0.01.

Supplemental Figure 4: RP782 uptake specificity in atherosclerosis. Examples of aorta autoradiography in mice fed a high fat diet for 1 month without (left) or with (right) injection of 50-fold excess unlabeled precursor prior to RP782 administration.

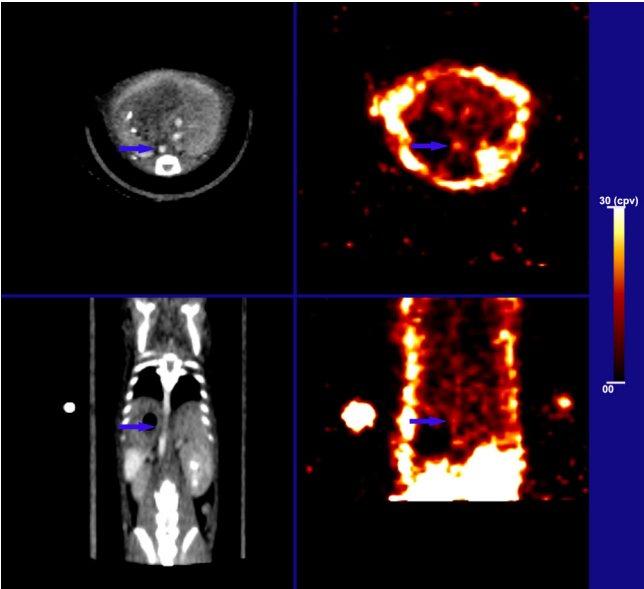
Supplemental Figure 5: A) Mean microSPECT-derived RP782 uptake on serial 2 mm-segments of the aorta of mice fed high fat diet for 3 months (HFD) or high fat diet for 2 months followed by 1 month of normal chow (HFW). n=4 in each group, p=0.02. B) Example of RP782 autoradiography in animals fed a high fat diet for 2 months followed by 1 month of normal chow. C) Autoradiography-derived quantification of RP782 uptake

on serial 2 mm-segments of the aorta in animals fed high fat diet for 3 months (HFD) or high fat diet for 2 months followed by 1 month of normal chow (HFW). n=4 in each group.

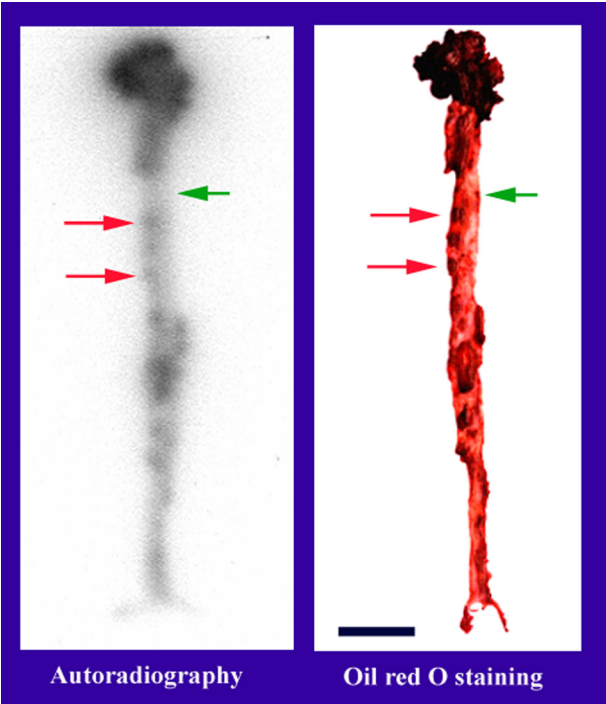
Supplemental Figure 6: GAPDH-normalized CD31 and smooth muscle α -actin mRNA expression detected by real time RT-PCR in the aortae of animals fed a high fat diet for 3 months (HFD) or high fat diet for 2 months followed by 1 month of normal chow (HFW). n=3 in each group,

Supplemental Fig. 7: GAPDH-normalized MMP mRNA expression detected by real time RT-PCR in serial 4 mm-segments of the aorta (S1 to S4) of animals fed high fat diet for 3 months (black bars) or high fat diet for 2 months followed by 1 month of normal chow (grey bars). n=3 in each group. *: p<0.05, **: p<0.01, ***:p< 0.001.

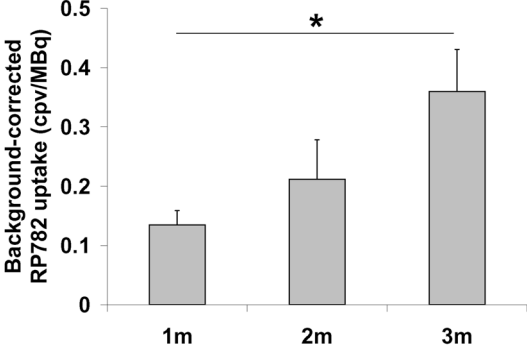
Supplemental Fig 1



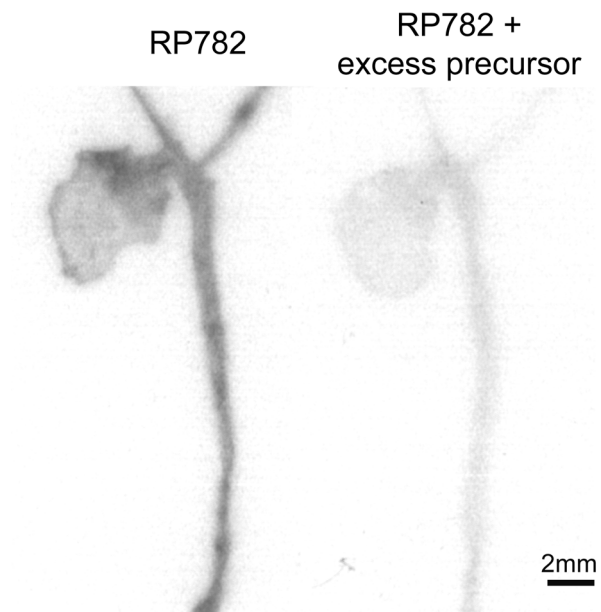
Supplemental Fig 2



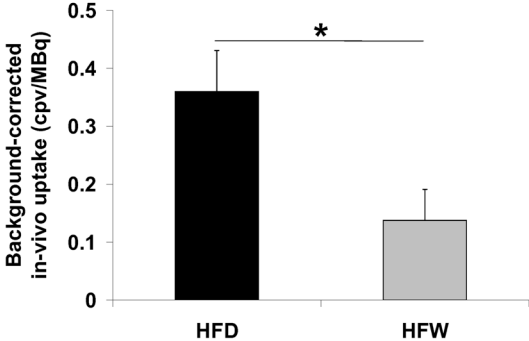
Supplemental Fig 3



Supplemental Fig 4



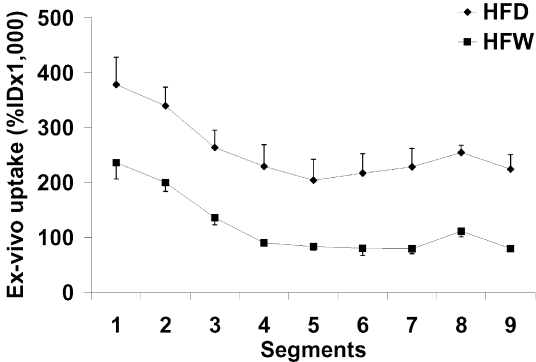
Supplemental Fig 5a



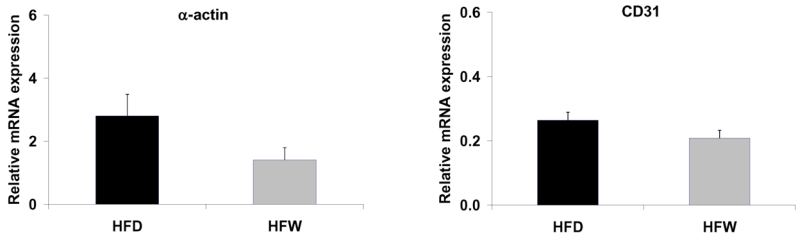
Supplemental Fig 5b



Supplemental Fig 5c



Supplemental Fig 6



Supplemental Fig 7

