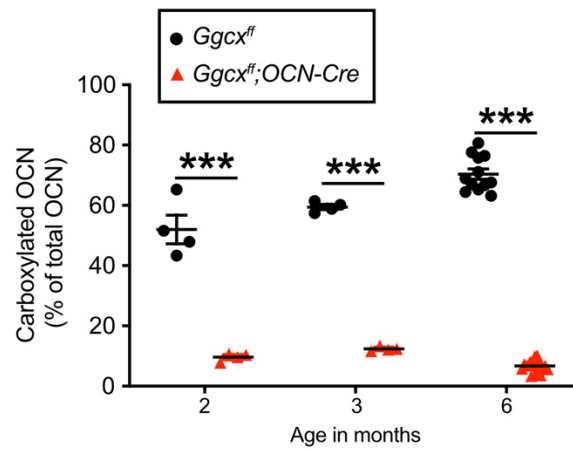
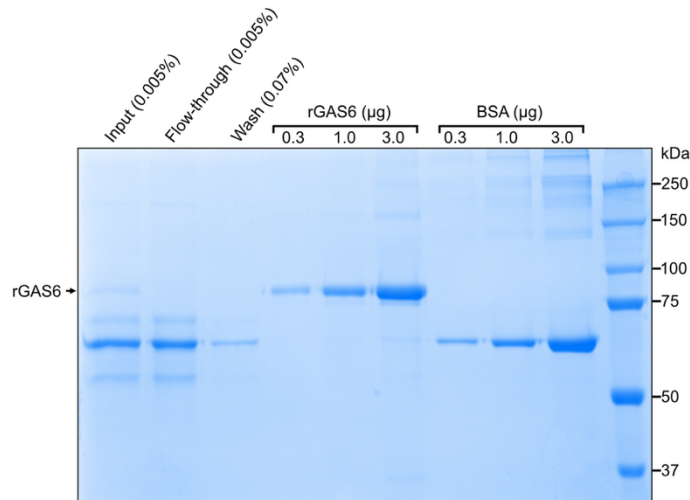
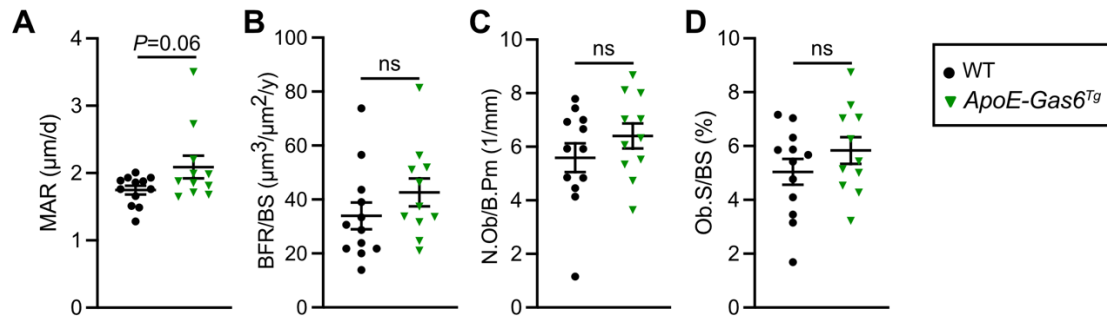




Supplementary Fig. 1. *Ggcx* inactivation in osteoblasts markedly reduced osteocalcin carboxylation level. Serum level of carboxylated osteocalcin (OCN) expressed as a percentage of total osteocalcin in *Ggcx^{fl}* and *Ggcx^{fl};OCN-Cre* male mice at the indicated ages (n=4-17). ***p < 0.001.



Supplementary Fig. 2. Purification of recombinant carboxylated GAS6. Coomassie stained SDS-PAGE gel representing the different steps of the purification. Recombinant 6×HIS tagged GAS6 (rGAS6) was produced from HEK293 cells in the presence of vitamin K₁ to ensure maximal carboxylation. The cell supernatant (Input) was collected and GAS6 purified by nickel affinity chromatography. Following binding, GAS6 was depleted from the media (Flow-through). After extensive washes (Wash), rGAS6 was eluted using an imidazole-containing buffer, and the purified protein was dialyzed against PBS. The concentration of the purified rGAS6 was next determined using a BSA standard (BSA).



Supplementary Fig. 3. Increased circulating GAS6 level does not impact bone formation parameters. Bone histomorphometry analysis of lumbar vertebrae in six-month-old *WT* (non-transgenic littermates) and *ApoE-Gas6^{Tg}* male (n=11-12). **(A)** Mineral apposition rate (MAR). **(B)** Bone formation rate over bone surface (BFR/BS). **(C)** Number of osteoblasts per bone perimeter (N.Ob/B.Pm). **(D)** Osteoblast surface over bone surface (Ob.S/BS). ns : non-significant.

Supplemental Table 1. List of oligonucleotides used in this study.

Gene	Forward Sequence 5'-3'	Reverse Sequence 5'-3'	Purpose
<i>Ggcx</i>	TTGACCCTCGTGTGGACATC	AATCTGCAATGAAGACCACC	qPCR
<i>Vkorcl</i>	ATTACCGCGCGCTCTGCGA	AAGAACAGGATCCAGGCCAG	qPCR
<i>Hprt</i>	TCAGTCAACGGGGGACATAAA	GGGGCTGTACTGCTTAACCAG	qPCR
<i>Rankl</i>	AAGATGCGACGTACTTTGGG	CGTGGGCCATGTCTCTTAGT	qPCR
<i>Opg</i>	GAAAGACCTGCAAATCGAGC	TTGTGAAGCTGTGCAGGAAC	qPCR
<i>Csfl</i>	GCAAGGGACTCACTAGCCTG	TATGCCTTTACGGGAAGTCG	qPCR
<i>Bglap</i>	CAGACAAGTCCCACACAGCA	CTTGGCATCTGTGAGGTCAG	qPCR
<i>Mgp</i>	GGCGAGCTAAAGCCCCAAAAG	GTAGTCATCGCAGGCCTCTC	qPCR
<i>Ucma</i>	CAAGCGGTCTCCTAAGTCCC	TGGCGGTTGTAGAGGTAGGA	qPCR
<i>Postn</i>	AAGGCGAAACGGTGACAGAA	TCGTTCTTCCCGAGTCTGTT	qPCR
<i>F2</i>	TGGAAGGTCGCTGTGCTATG	CAGAGCGAGGAGTCATCACC	qPCR
<i>F7</i>	GAGGACTACACGCTACAGCC	CGGTCACTATCCATCTGGCG	qPCR
<i>F9</i>	GCAAAACCGGGTCAAATCCC	AGACAGTGGGCAGCAGTTAC	qPCR
<i>F10</i>	CACTGCCGTCCTTGACCAC	TTGGCACGTTCCCGGTTAAT	qPCR
<i>ProC</i>	GCGCTACCTGGACGAAATTG	GAACACTGGGTCAGGATGGG	qPCR
<i>ProS1</i>	GTGAGGGTATCCCAAGTGTGC	CATCACGAAGCGCAATCAGG	qPCR
<i>ProZ</i>	CCCTGACTTCCGAACACATCA	CGACTCCTCGTCATAACGCAT	qPCR
<i>Gas6</i>	ATGAAGATCGCGGTAGCTGG	CCAATCCTCATGCACCCAT	qPCR
<i>Prrg1</i>	CCAGTCACTTCCTCTGTTGGTTT	ACTAAAACGCTACCCAAGAGCC	qPCR
<i>Prrg2</i>	AGGCGTTTTCCTCGTGCTAA	AGGATCCCAGAGGTCAGTCC	qPCR
<i>Prrg3</i>	GCTCTGTGAGGGGTCTCGAA	AAGAAGCATCATGGCTGTATTCT A	qPCR
<i>Prrg4</i>	CCGCCTCCTGAACAATAGGT	ATGGCCGCCTTTTACACTTG	qPCR
<i>Actb</i>	GACCTCTATGCCAACACAGT	AGTACTTGCGCTCAGGAGGA	qPCR
<i>MerTK</i>	GGTTCTGGCCCCACTGCTAC	CAGAGAATGGCCTGTGGTTGA	qPCR
<i>Axl</i>	CCAGTCACAGGACACAGCTC	ATACCCACCCCATCGTCTGA	qPCR
<i>Tyro3</i>	ACGATCTCCAGCTACAACGC	TTGTCTGAAAGGGCACCCAG	qPCR
<i>Acp5</i>	AGTCCTGCTTGTCGGCTAAC	CCTAAAAGGGGTGAGCCTGG	qPCR
<i>Cln7</i>	TCTCGCTTGAGTGATGTTGACC	GACTGGCTGTGGGAAAGGAA	qPCR
<i>Ctsk</i>	CGTGCAGCAGAACGGAGGCA	GTCCTACCCGCGCCACTGCT	qPCR
<i>Dc-stamp</i>	TTGCCGCTGTGGACTATCTG	GAATGCAGCTCGGTTCAAAC	qPCR
<i>Ggcx^{lox/lox}</i>	TCATTGAGTCCTTCCCGAAC	TCCAAGTGCGTCTTTAACTCC	Genotyping
<i>Oc-Cre</i>	CAAATAGCCCTGGCAGATTC	ACGCCTGGCGATCCCTGAACAT	Genotyping
<i>Bglap^{+/-}</i>	TGGAGTGGTCTCTATGACCT	TTCCTTGACCCTGGAAGGTG	Genotyping
	TTGTGCTGGGGTGGTTTCTG	AGCCTTCCCCAACCCCTATT	
<i>Ctsk-Cre</i>	GCGGTCTGGCAGTAAAACTAT C	GTGAAACAGCATTGCTGTCACTT	Genotyping
<i>tdTomato^{lox/lox}</i>	AAGGGAGCTGCAGTGAGTA	CCGAAAATCTGTGGGAAGTC	Genotyping
	GGCATTAAAGCAGCGTATCC	CTGTTCTGTACGGCATGG	
<i>ApoE-Gas6</i>	AAGGCTAACCTGGGGTGAGG	AAGTTCTGAACACATTTGGCGA	Genotyping

Supplemental Table 2. List of antibodies used in this study.

Antibody	Source	Catalog #	Application	Dilution
Rabbit anti-GGCX	ProteinTech	16209-1-AP	WB	1/1000
Rabbit anti-VKORC1	Ferron et al. 2015 ³³	Custom made	WB	1/1000
Mouse anti- β -Actin	MilliporeSigma	A1978	WB	1/2000
Rabbit anti-phospho-AXL (Y702)	Schott et al. 2024 ⁴⁰	Custom made	WB	1/1000
Goat anti-Axl Antibody (C-20)	SantaCruz	sc-1096	WB	1/500
Rabbit anti-phospho-AKT (Ser473)	Cell Signaling	9271	WB	1/1000
Rabbit anti-AKT (pan) (C67E7)	Cell Signaling	4691	WB	1/1000
Mouse anti-MERTK	R&D	AF591	WB	1/1000