


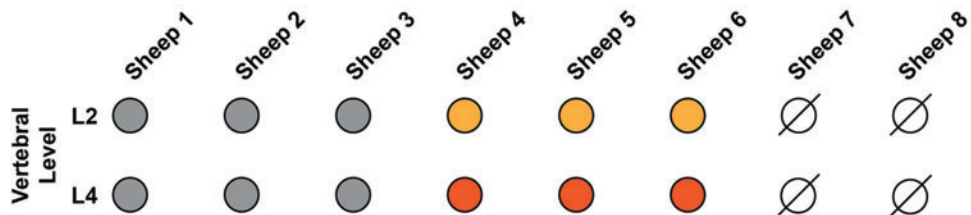


Supplementary Data

Treatment	# Vertebrae	HA (mL)	β -TCP (mg)	Total Dose rhNELL-1 (mg)	Concentration rhNELL-1 (mg/mL)
Control 	6	1.5	150	0	0
rhNELL-1 (low dose) 	3	1.5	150	0.9	0.6
rhNELL-1 (high dose) 	3	1.5	150	2.25	1.5



SUPPLEMENTARY FIG. S1. rhNELL-1 implant material contents and bi-level sheep vertebral implantation surgery. Surgery was performed 4 months post-OVX on $n=6$ osteoporotic sheep that were most responsive to osteoporosis induction as confirmed by DXA. The table shows rhNELL-1 implant material contents of sheep implant. The schematic illustrates a bi-level surgery of sheep vertebrae. 0.09 mg of rhNELL-1 was implanted in L2, and 2.25 mg of rhNELL-1 was implanted in L4 of $n=3$ randomly selected sheep. Control vehicles were implanted in L2 and L4 vertebrae of $n=3$ remaining sheep. L2 and L4 of sheep vertebrae are anatomically similar to human vertebrae as previously shown. Additionally, L2 and L4 are anatomically similar to each other. β -TCP, β -tricalcium phosphate; DXA, dual-energy X-ray absorptiometry; HA, hyaluronic acid; rhNELL-1, recombinant human NELL-1.