Supplementary Table S1. The primers used in this study

Classification	Name	Sequence (5'-3')
The siRNA and a nonsense to IMAT1	siRNA-IMAT1	GCGCAGGCCCAGGAAGGCG
	nonsense-IMAT1	GGTAGGTGGGCAGCTGAGA
Construction of overexpression vector	IMAT1-forward	GGAATTCTTAATGTGGCAAGGCACAGA
	IMAT1-reverse	CGGGATCC CTACGCGCTTCTGGGCCGCACG
	KLF4-forward	GGAATTCGCCACCATGAGGCAGCCACCTGGCG
	KLF4-reverse	CGGGATCCTTAAAAATGCCTCTTCATGTGTAAGG
Construction of luciferase vector	miR22-3p-promoter-forward	GGGGTACCCTTCCGCCACGACTCCCGTCCCAGA
	miR22-3p-promoter-reverse	CCCAAGCTTGGCGCTGACGCGGAGGGCTGGGCC
	3'UTR-Snai1-forward	GCTCTAGATTCCCATGGCCATTTCTGTGGAGG
	3'UTR-Snai1-reverse	GCTCTAGACCTGAGTGGGGTGGGAGCTT
RNA synthesis	hsa-miR-22-3p mimic	AAGCUGCCAGUUGAAGAACUGUTT
	hsa-miR-22-3p inhibitor	ACAGUUCUUCAACUGGCAGCUUTT
	hsa-miR-22-3p NC	CGUGCGUUACAUAACGAGAUGATT
RT-PCR in ChIP-PCR	ChIP-PCR forward	CTGCGTGACCGGGTCGCCAGC
	ChIP-PCR reverse	GTGCTGGGTGTGGGGGTT
RT-qPCR	IMAT1-RT-qPCR forward	TTCCCACGACCCTCAGCCTGCC
	IMAT1-RT-qPCR reverse	TCCGCCAGGACCTGCGGAGGC
	KLF4-RT-qPCR forward	GCGGGCTGCGGCAAAACCTACAC
	KLF4-RT-qPCR reverse	AGCGGGCGAATTTCCATCCACAGC
	Snai1-RT-qPCR forward	AAGCCTAACTACAGCGAGCTG
	Snai1-RT-qPCR reverse	AGCGAGGCGGTGGGGTTGAGG
	β-actin-RT-qPCR forward	CCTGTACGCCAACACAGTGC
	β-actin-RT-qPCR reverse	ATACTCCTGCTTGCTGATCC
	U6-RT-qPCR forward	GTGCTCGCTTCGGCAGCACAT
	U6-RT-qPCR reverse	TACCTTGCGAAGTGCTTAAAC
	miR22-3p-RT-qPCR forward	GCCGGCGCCCGAGCTCTGGCTC
	miR22-3p-RT-qPCR reverse	AAGCTGCCAGTTGAAGAACTGT
Specific primers	hsa-miR-22-3p RT primer	GTCGTATCCAGTGCGTGTCGTGGAGTCGGCAATTGCACTGGATACGAACAGT
The probes used for FISH	probe-IMAT1-FISH	TTCCGCCACGACTCCCGTCCCAGACTC(5'/3' Cy3 modification)
	probe-hsa-miR-22-3p-FISH	TGTCAAGAAGTTGACCGTCGAA(5'/3' DIG modification)