8. Long Non-Coding RNA HOXC-AS1 Suppresses Ox-LDL-Induced Cholesterol Accumulation Through Promoting HOXC6 Expression in THP-1 Macrophages.

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文章简介

本研究通过基因芯片分析颈动脉斑块及正常动脉内膜组织差异表达基因，并采用生物信息学分析，发现 lncRNA HOXC-AS1 和 HOXC6 在颈动脉粥样硬化组织中表达下调，lncRNA HOXC-AS1 可能调控 HOXC6 的表达。实时定量 PCR 和免疫印记检测发现过表达 lncRNA HOXC-AS1 后，HOXC6 的 mRNA 和蛋白质水平都升高。 此外，ox-LDL 刺激 THP-1 细胞后可导致细胞内胆固醇增多，而 HOXC-AS1 过表达可部分抑制 ox-LDL 对胆固醇聚集的诱导作用。结果提示 lncRNA HOXC-AS1 可通过上调 HOXC6 的表达来减轻 ox-LDL 对 THP-1 细胞的胆固醇聚积作用。

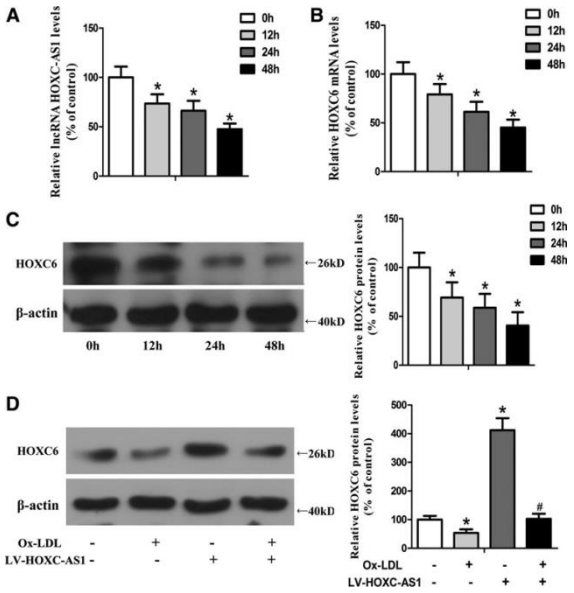

Fig. Ox-LDL suppressed the expression of lncRNA HOXC-AS1 and HOXC6 in THP-1 macrophages. (A-C) THP-1 macrophages were treated with 50mg/mL of Ox-LDL for 0, 12, 24, and 48h, respectively. (D) THP-1 macrophages were treated with LVHOXC-AS1 and then incubated with or without 50mg/ mL of Ox-LDL for 48h. (A, B) RNA levels of HOXCAS1 and HOXC6 were measured by qRT-PCR. (C, D) The expression level of the HOXC6 protein was measured by western blot analysis. The results are presented as mean–SD of five independent experiments, each performed in triplicate. *p<0.01 versus negative control. #p<0.01 versus the Ox-LDL group. Ox-LDL, oxidized low-density lipoprotein.