

# Targeting hepatic heparin-binding EGF-like growth factor (HB-EGF) using HB-EGF-specific antisense oligonucleotide (ASO)

## Abstract

**Citation:** Targeting hepatic heparin-binding EGF-like growth factor (HB-EGF) using HB-EGF-specific antisense oligonucleotide (ASO). **protocols.io**

<https://www.protocols.io/view/targeting-hepatic-heparin-binding-egf-like-growth-ix2cfqe>

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## Protocol

### Materials

#### Step 1.

- Control ASO (549144: 5'- GGCCAATACGCCGTCA -3') and HB-EGF ASO (597622: 5'- TACATTATAGTCTTGG -3') were synthesized and purified by Ionis
- Poloxamer-407, a lipoprotein lipase inhibitor, was purchased from Sigma-Aldrich (Cat No. 16758)
- Recombinant HB-EGF (human) was purchased from R&D systems (Cat No. 295-HE-CF).

### Animals

#### Step 2.

- Male LDLR deficient mice (Jackson Laboratory, 8-10 weeks of ages; stock # 002207) were used for study
1. The mice were treated with either control or HB-EGF ASOs at a dose of 40 mg/kg/wk for 10 weeks
  2. To induce hyperlipidemia in the mice, HFD (Harlan, Cat No TD-88137) was fed ad libitum during the last 5 weeks
  3. To expedite lesion and aneurysm development, AngII infusion (1,000 ng/kg/min, Bachem, Torrance, CA, ) via osmotic minipump implanted during the last 4 weeks of the study
  4. Topically analgesic application was performed immediately after and 3-4 hours post-surgery to ameliorate pain at incision site

### Noninvasive tail cuff method to measure blood pressure

#### Step 3.

- Blood pressure is measured using the Kent blood pressure machine as described in the previous report
  - This unit is a computerized, non-invasive tail-cuff system for measuring mouse systolic and diastolic blood pressure
1. A platform is warmed to 37 °C to keep mice warm

2. Mice are placed in plexi-glass holders
3. Tails are threaded through an O-ring and VPR-ring
4. The 10 preliminary and 10 actual measurements are made in 15 minutes
5. The mice are housed comfortably in holders
6. We measured blood pressure three consecutive days at the same time
7. Only mice that measured 50% (10 measurements) with a SD < 30 mmHg were accepted