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Hypertension ELISA (11,12-DHET) kit

Cat # DH 4: ELISA kit for measuring 11,12-DHET in biological samples

This competitive ELISA kit is for determination of 11,12-DHET levels in biological samples¹. Anti-11,12-DHET does not cross-react with 5(S)15(S)DiHETE and arachidonic acid (AA) and minimally cross-reacts with 8,9- and 14,15-DHETs. The 11,12-DHET is a metabolite of soluble epoxide hydrolase (sEH)-mediated metabolism of the 11,12-EET, which is generated by AA epoxygenase activity of cytochromes P450. The 11,12-DHET plays a critical role in vasorelaxation mediated by endothelial cell large-conductance Ca^{2+} -activated K^+ (BK_{Ca}) channels^{2,3}. Whereas 8,9- and 14,15-DHETs dilated isolated human coronary arterioles (HCAs) less than the corresponding EETs, 11,12-DHET dilated them similarly to the 11,12-EET⁴. 11,12-DHET ELISA was used to quantify eicosapentaenoic acid (EPA)-dependent increase of 11,12-EET levels (via PPAR γ) in endothelial cells⁵. High glucose reduced 11,12-EET production in porcine coronary artery endothelial cells, which impaired EET/endothelium-derived hyperpolarizing factor (EDHF)-mediated vasodilation in coronary arterioles⁶. Recently, 11,12-EETs were found to protect against angiotensin II-induced abdominal aortic aneurysm in mice⁷ and increased after indapamide treatment, which lowered blood pressure⁸.

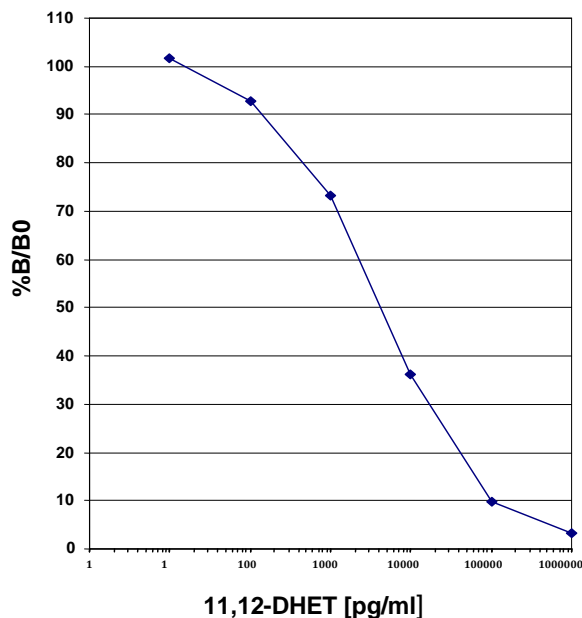
Each kit for triplicate analyses of up to 24 samples contains one 96 well plate, one tube of 11,12-DHET standard, one tube of 11,12-DHET-conjugated horseradish peroxidase (HRP), and buffers for sample and HRP dilutions, and plate washing.

Two Other Hypertension ELISA kits:

- 20 HETE Hypertension ELISA kit:
- 14,15-DHET Hypertension ELISA kit:

Oxidative Stress ELISA Kit:

- 8-iso PGF_{2 α} (isoprostane) ELISA kit:



1. Kim et al. Three US Patents: 14,15 and 11,12-DHET dependent hypertension 6,440,682, 6,534,282 and 7,695,927 issued on 8/27/2002, 3/18/2003 & 4/13/2010 respectively. (<http://patft.uspto.gov/netahtml/srchnum.htm>)
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5. D. Wang, T. Hirase, T. Nitto, M. Soma, K. Node. Eicosapentaenoic acid increases cytochrome P450 2J2 gene expression and epoxyeicosatrienoic acid production via peroxisome proliferator-activated receptor γ in endothelial cells. *J. Cardiol.* 54, 368-374, 2009.
6. Yang, Kuo et al., High glucose impairs EDHF-mediated dilation of coronary arterioles via reduced cytochrome P450 activity. *Microvasc. Res.* 82, 356-363, 2011.
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8. Ma F, Lin F, Chen C, Cheng J, Zeldin DC, Wang Y, Wang DW. Indapamide lowers blood pressure by increasing production of epoxyeicosatrienoic acids in the kidney. *Mol Pharmacol* 84,286-295, 2013