



12-HETE Hypertension ELISA kit

Cat # 12H 1: ELISA kit for measuring 12-HETE in biological samples: \$247

This competitive ELISA kit is for determination of 12-HETE (12-Hydroxyeicosatetraenoic acid) levels in biological samples. The specificity of the 12-HETE ELISA was investigated using authentic 12-HETE and fatty acids which, based on their structure, might be anticipated to compete with 12-HETE for binding to antibodies against 12-HETE. Anti-12-HETE only slightly cross-reacted with 15-HETE and 13-HODE.

HETEs are byproducts generated by the metabolism of arachidonic acid by lipoxygenases. 12(S)-HETE is the stereospecific hydroxyl product produced from the reduction of 12(S)-hydroperoxytetraenoic eicosatetraenoic acid [12(S)-HpETE], which is itself a 12-lipoxygenase metabolite of arachidonic acid. It has recently been reported that platelet 12(S)-HETE production is enhanced in the spontaneously hypertensive rat¹. 12(S)-HETE levels and 12-lipoxygenase (12-LO) protein are increased in patients with essential hypertension², also suggesting a role for this metabolite in human hypertension. These metabolites exhibit a variety of biological activities such as mediation of angiotensin II-induced intracellular calcium transients in cultured rat vascular smooth muscle cells³ and as a second messenger in angiotensin-II induced aldosterone production⁴. 12(S)-HETE also acts as an aggregator of polymorphonuclear leukocytes⁵ and is a highly selective ligand used to label mu opioid receptors⁶ and serves as a biomarker of Churg-Strauss syndrome⁷.

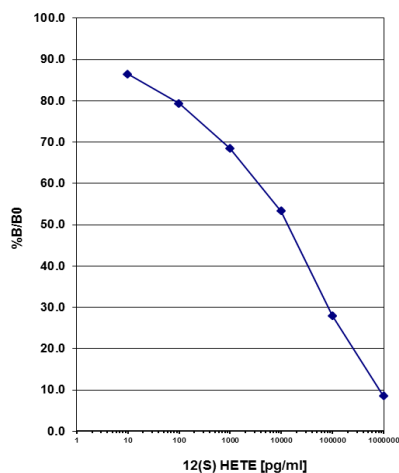
Each kit can be used for triplicate analyses of up to 24 samples contains using a 96 well plate format, and contains a vial of 12-HETE standard, a vial of 12-HETE-conjugated horseradish peroxidase (HRP), and buffers for sample and HRP dilutions, and plate washing.

Cat # 20H 11: 2X ELISA kits for measuring 12-HETE in biological samples: 2X \$241.50 = \$483

Cat # 20H 21: 5X ELISA kits for measuring 12-HETE in biological samples: 5X \$219.60 = \$1098

Cat # 20H 101: 10X ELISA kits for measuring 12-HETE in biological samples: 10X \$205 = \$2053

Related Products



Hypertension/Stroke ELISA kits:

- 14,15-DHET Hypertension/Stroke ELISA
- 11,12-DHET Hypertension/Stroke ELISA
- 20-HETE Hypertension/Stroke ELISA

Cancer ELISA Kit:

- NAG-1 (MIC-1, GDF15) Cancer ELISA
- 12-HETE Cancer ELISA

Oxidative Stress ELISA Kit:

- 8-isoprostane ELISA

Hypertension Antibodies:

- Rat: CYP2C23, CYP2C11, CYP2C, CYP4A, sEH
- Human: CYP1B1, CYP2C8/9

Specificity of anti-20-HETE ELISA

Eicosanoids	% Binding of control
12-HETE	100.00
15-HETE	3.8
13-HODE	2.6

References

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2. González-Núñez, Daniel, Joan Claria, Francisca Rivera, Esteban Poch. Increased levels of 12(S)-HETE in patients with essential hypertension. *Hypertension* 2001; 37: 334-338
3. Natarajan, Rama, Noe Gonzales, Linda Lanting, Jerry Nadler. Role of the Lipoxigenase pathway in angiotensin II-induced vascular smooth muscle cell hypertrophy. *Hypertension* 1994; 23: 1142
4. J L Nadler, R Natarajan and N Stern. Specific action of the lipoxigenase pathway in mediating angiotensin II-induced aldosterone synthesis in isolated adrenal glomerulosa cells. *J Clin Invest*. 1987;80(6):1763–1769.
5. O'Flaherty JT, Thomas MJ, Lees CJ, McCall CE Neutrophil-aggregating activity of monohydroxyeicosatetraenoic acids. *Am J Pathol*. 1981 Jul;104(1):55-62.
6. Christie, M.J., C.W. Vaughan and S.L. Ingram. Opioids, NSAIDs, and 5-lipoxygenase inhibitors act synergistically in brain via arachidonic acid metabolism. *Inflamm. Res*. 1999, 48: 1-4.
7. Szczeklik W, Sanak M, Mastalerz L, Sokołowska BM, Gielicz A, Soja J, Kumik J, Musiał J, Szczeklik A. 12-hydroxy-eicosatetraenoic acid (12-HETE): a biomarker of Churg-Strauss syndrome. *Clin Exp Allergy*. 2012 Apr;42(4):513-22

