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## Diabetes ELISA (14,15-DHET) Kit for Blood, Urine, Tissues and Cells

Cat # DH 1: ELISA kit for measuring 14,15-DHET in biological samples

Cat # DH 2: ELISA kit for measuring 14,15-EET/DHET in biological samples

Recent diabetic mouse and rat model studies using the Detroit R&D **14,15-DHET ELISA kit** revealed that increased EET levels by CYP2J gene therapy (Ref 2, 4, 5, 7) or soluble epoxide hydrolase gene deletion (Ref 6) reduced insulin resistance protection against diabetic nephropathy. Diabetes can be induced in lab animals by treatment with streptozotocin (Ref 5, 6) and high levels of fructose (Ref 2 and 4) or fat (Ref 7) can affect insulin resistance through alterations in P450 expression. Rat proximal tubular cells were used to study diabetic nephropathy after high glucose treatment (Ref 7). Screening of DHET levels in human plasma samples using the **14,15-DHET ELISA kit** revealed an earlier onset (<40 years old) of type-2 diabetes mellitus (T2DM) in Chinese populations with the CYP2J polymorphism (Ref 3).

Our **14,15-DHET ELISA kit** provides a powerful tool for both basic research and clinical applications. This ELISA approach is sensitive and quick for measurement of increased EET or DHET levels in various biological samples obtained from human and animals.

### 14,15-DHET references

1. Kim et al. Four US Patents: 6,440,682, 6,534,282, 7,695,927 and 8,409,821.  
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3/2003 <http://www.freepatentsonline.com/6534282.pdf> ,  
4/2010 <http://www.freepatentsonline.com/7695927.pdf>  
4/2013 <http://www.freepatentsonline.com/7572592.pdf>
2. Xu, Zeldin, Wang et al. Increased CYP2J3 expression reduces insulin resistance in fructose-treated rats and db/db mice. *Diabetes* 59, 997-1005, 2010.
3. Wang, Hung, Lee et al. Genetic variation in the G-50T polymorphism of the cytochrome P450 epoxygenase CYP2J2 gene and the risk of younger onset type 2 diabetes among Chinese population: potential interaction with body mass index and family history. *Exp Clin Endocrinol Diabetes*. 118, 346-352, 2010.
4. Xu, Tu, Wang et al. CYP2J3 gene delivery reduces insulin resistance via upregulation of eNos in fructose-treated rats. *Cardiovasc Diabetol* 10, 114, 2011.
5. Chen, Zeldin, Wang et al. Cytochrome P450 epoxygenase CYP2J2 attenuates nephropathy in streptozotocin-induced diabetic mice. *Prostaglandins Other Lipid Mediat* 96, 63-71, 2011.
6. Chen, Xu, Zeldin, Wang et al. Genetic disruption of soluble epoxide hydrolase is protective against streptozotocin- induced diabetic nephropathy. *Am J Physiol Endocrinol Metab* 303, E563-E575, 2012.
7. Xu Tu, Wang et al. CYP2J3 gene delivery up-regulated adiponectin expression via reduced endoplasmic reticulum stress in adipocytes. *Endocrinology* 154, 1743-53, 2013.
8. Eid, Maalouf, Eid et al. 20-HETE and EETs in diabetic nephropathy: A novel mechanistic pathway. *PLOS ONE* 8, e70029, 2013.

### Related Products:

**Other Hypertension & Oxidative Stress ELISAs**  
11,12-DHET/EET ELISA (Cat.# DH 2, Cat.# DH 5)  
20-HETE ELISA (Cat.# 20H1)  
12-HETE ELISA (Cat.#12H1)  
8-Isoprostane Oxidative Stress ELISA (Cat.# 8iso1)

### Antibodies

Polyclonal Rabbit anti-P450 **1B1** Human (Cat.# PH1B1)  
Polyclonal Rabbit anti-P450 **2C9/2C10** Human (Cat.# P2C)  
Polyclonal Rabbit anti-P450 **2C23** Rat (Cat.# P2C23DR)  
Polyclonal Rabbit anti-P450 **sEH** (Rat, Human) (Cat.#SEH1)