## **Dityrosine (DT) EIA Test Kit**

Protein oxidation marker

Catalog Number: 22010

Suitable for urine samples. For research use only.

Store at 2 to 8°C.

## A novel biomarker for protein oxidation

Tyrosine is one of the major targets of protein oxidation, and until today various tyrosine derivatives such as nitrotyrosine, dityrosine and halogenated tyrosine depending on the type of free radicals. DT is a tyrosine dimer derived from tyrosyl radicals which is formed by reactive oxygen species (ROS), metal-catalyzed oxidation, ultraviolet irradiation, and peroxidases. DT have been found in atherosclerotic lesions, and lipofuscin of pyramidal neurons of aged human brains. Dityrosine is one of the specific biomarkers for protein oxidation.

Recently, dityrosine is reported to exist also in urine samples. It is expected that DT may be a novel protein oxdation marker, which is non-invasively detectable. DT ELISA kit is designed for quantitative measurement of DT especially in urine samples.

## **Specifications**

Samples: Urine

**Specifity:** Specific to dityrosine (tyrosine

dimer)

Assay range:  $0.05 - 12 \,\mu\text{mol/L}$ 

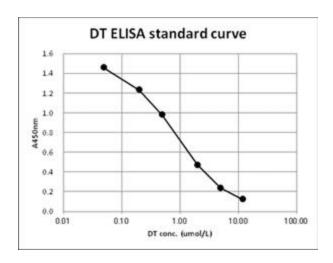
Measurement: 450 nm

**Quantity:** 96 wells

**Assay time:** Overnight and 2 hours

**Storage:** 2 - 8 °C. Don't freeze.

**Expiration:** Printed on a package



## Reference

- 1) Kato Y, Wu X, Naito M, Nomura H, Kitamoto N, Osawa T:
  - Immunochemical detection of protein dityrosine in atherosclerotic lesion of apo-E-deficient mice using a novel monoclonal antibody.
  - Biochem Biophys Res Commun. 275(1), p11-15 (2000).
- **2)** Hattori Y, Mukaide T, Jiang L, Kotani T, Tsuda H, Mano Y, Sumigama S, Hirayama T, Nagasawa H, Kikkawa F, Toyokuni S: Catalytic ferrous iron in amniotic fluid as a predictive marker of human maternal-fetal disorders.
  - J Clin Biochem Nutr 56(1),p57-63(2015) doi: 10.3164/jcbn.14-82

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