

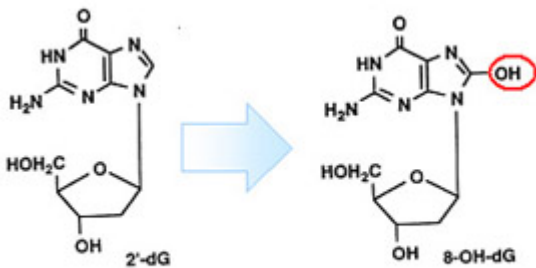


New 8-OHdG Check ELISA

ELISA kit for 8-hydroxy-2'-deoxyguanosine

Suitable for assessment of oxidative stress using urine samples. For research use only.

About 8-hydroxy-2'-deoxyguanosine (8-OHdG):



Formation of 8-hydroxy-2'-deoxyguanosine (8-OHdG) by oxygen radicals.
H Kasai: Environmental Mutagen Research, Vol. 10, p73-78 (1988)

8-hydroxy-2'-deoxyguanosine (8-OHdG) is a product of oxidatively damaged DNA formed by hydroxy radical, singlet oxygen and direct photodynamic action. 8-OHdG can be detected in tissue, serum, urine and other biomaterials. New 8-OHdG Check is a competitive enzyme-linked immunosorbent assay (ELISA) utilising monoclonal antibody (clone N45.1) which is highly specific for DNA damage, not cross react with RNA oxidation products such as 8-hydroxy-guanine and 8-hydroxy-guanosine. This product is suitable for detection of 8-OHdG in urine and other biomaterials from human and animals.



This product is a 8-OHdG ELISA kit utilizing anti 8-OHdG monoclonal antibody (clone N45.1) which is highly specific for 8-OHdG. We provide two types of 8-OHdG ELISA kits with different assay range. New 8-OHdG Check ELISA is suitable for urine and serum sample from animal and human. If you are planning to measure 8-OHdG in human serum, tissue, cultured cells, we recommend to use 'Highly Sensitive 8-OHdG Check ELISA'.

Specifications

| | |
|-------------------------|---|
| Assay principle: | Competitive ELISA (detection: 450 nm) |
| Specificity: | Specific for 8-OHdG. Antibody have been tested to 8-OHdG analogues (guanosine(G),7-methyl-G, 6- |

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SH-G, 8-Bromo-G, dA, dC, dT, dl, dU, dG, O6-methyl-dG, 8-OHdA, guanine(Gua), O6-methyl-Gua, 8-OH-Gua, uric acid, urea, creatine, creatinine, 8-sulfhydryl-G, 8-OH-G).

| | |
|-----------------------------------|--|
| Measuring range: | 0.5 to 200 ng/mL |
| Format: | 96 wells (18 samples in triple assays) |
| Applications: | Urine from human and animals. For serum and tissue samples, Highly Sensitive 8-OHdG Check (code #KOG-HS10E) is recommended. |
| Storage: | Store at 4 - 10°C (don't freeze). |
| Expiry: | 12 months after the day of manufacturing. |
| Required but not provided: | Micropipet and chip (100 micro L, 1000 micro L). Measuring pipet (10 mL, 20 mL)/ measuring cylinders. 8 or 12-synchronous multichannel pipet and reagent tray for multichannel pipet. Microplate reader (filter; 450 nm). |

Content of this kit

| | | |
|---------------------------------------|--|--------------------|
| 8-OHdG Microtiter Plate: | Precoated with 8-OHdG(12 X 8wells, split type) | 1 plate |
| Primary Antibody: | Anti 8-OHdG antibody, powder. | 1 vial |
| Primary Antibody Solution | | 1 vial (6mL) |
| Secondary Antibody: | HRP-anti mouse antibody, powder. | 1 vial |
| Secondary Antibody Solution: | | 1 vial (12mL) |
| Chromatic Solution: | 3,3',5,5'-tetramethylbenzidine | 1 vial (0.25mL) |
| Diluting Solution: | H ₂ O ₂ containing buffer. | 1 vial (12mL) |
| Washing Solution(5x): | | 2 vials (26mL x 2) |
| Reaction Terminating Solution: | 1M Phosphoric acid. | 1 vial (12mL) |
| Standard 8-OHdG Solution: | Purified 8-OHdG (0.5, 2, 8, 20, 80, 200 ng/mL) | 1 vial each |

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Plate Seal:

2 sheets

References

- 1) H.Kasai, P.F.Crain, Y.Kuchino, S.Nishimura, A.Ootsuyama and H.Tanooka : Formation of 8-hydroxyguanine moiety in cellular DNA by agents producing oxygen radicals and evidence for its repair. *Carcinogenesis* 7(11), p1849-1851 (1986)
[8-OHdG/8-OHG is formed by reactive oxygen radicals.]
- 2) R.G.Cutler: Antioxidants and aging. *Am J Clin Nutr* 50,p373S-379S (1991)
[Relationship between lifespan and antioxidants, enzymes and 8-OHdG.]
- 3) S.Toyokuni, T.Tanaka, Y.Hattori, Y.Nishiyama, A.Yoshida, K.Uchida, H.Hiai, H.Ochi and T.Osawa: Quantitative immunohistochemical determination of 8-hydroxy-2'-deoxyguanosine by a monoclonal antibody N45.1: Its application to ferric nitrilotriacetate-induced renal carcinogenesis model. *Lab Invest* 76(3), p365-374 (1997)
[Specificity of the antibody clone N45.1.]
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[Development and assessment of 8-OHdG Check ELISA.]
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[Measurement of 8-OHdG in human urine.]
- 6) Morillas-Ruiz J, Zafrilla P, Almar M, Cuevas MJ, Lopez FJ, Abellan P, Villegas JA, Gonzalez-Gallego J: The effects of an antioxidant-supplemented beverage on exercise-induced oxidative stress: results from a placebo-controlled double-blind study in cyclists. *Eur J Appl Physiol* 95(5-6),p543-549(2005)
[Study about exercise, antioxidant supplements and urinary 8-OHdG.]
- 7) Someya T, Kaneko K, Yamada T, Yamashiro Y: Effect of a novel free radical scavenger, edaravone, on puromycin aminonucleoside induced nephrosis in rats. *Pediatr Nephrol* 20(10),p1430-1434(2005)
[Effect of antioxidants to 8-OHdG in rat urine.]
- 8) Shiihara T, Kato M, Ichiyama T, Takahashi Y, Tanuma N, Miyata R, Hayasaka K: Acute encephalopathy with refractory status epilepticus: Bilateral mesial temporal and claustral lesions, associated with a peripheral marker of oxidative DNA damage. *J Neurol Sci* 250(1-2),p159-161(2006)
[Measurement of 8-OHdG in human urine, serum and cerebro spinal fluid(CSF).]

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| Product name | Code | Assay range | Format | Application |
|------------------|-----------|---------------|----------|-------------------------|
| New 8-OHdG Check | KOG-200SE | 0.5-200 ng/mL | 96 wells | Urine and animal serum. |

Made in Japan.

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