

ARG80911 8 Hydroxyguanosine (8-OHdG) ELISA Kit

Package: 96 wells
Store at: 4°C and -20°C

Summary

Product Description	<p>ARG80911 8 Hydroxyguanosine (8-OHdG) ELISA Kit is a competitive ELISA assay kit that can be used for the quantification of 8-OH-dG in urine, cell culture supernatant, serum, plasma, saliva and cell/tissue lysate. The kit utilizes an 8-hydroxy-2-deoxy Guanosine-coated plate and an HRP-conjugated antibody for detection which allows for an assay range of 0.94 - 60 ng/ml, with a sensitivity of 0.59 ng/ml. The other highlights of this kit are a quick incubation time of 60 minutes, stable reagents, and an easy to use protocol.</p> <p>It is important to note that the 8-OH-dG antibody used in this assay recognizes both free 8-OH-dG and DNA-incorporated 8-OH-dG. Since complex samples such as plasma, cell lysates, and tissues are comprised of mixtures of DNA fragments and free 8-OH-dG, concentrations of 8-OH-dG reported by ELISA methodology will not coincide with those reported by LC-MS where the single nucleoside is typically measured. This should be kept in mind when analyzing and interpreting experimental results.</p>
Tested Reactivity	Other
Tested Application	ELISA
Specificity	Cross-reactivity: 8-hydroxy-2-deoxy Guanosine (100%); 8-hydroxy Guanosine (23%); 8-hydroxy Guanine (23%); Guanosine (0.01%)
Target Name	8 Hydroxyguanosine (8-OHdG)
Conjugation	HRP
Conjugation Note	Substrate: TMB and read at 450 nm
Sensitivity	0.59 ng/ml
Detection Range	0.94 - 60 ng/ml
Sample Type	Urine, cell culture supernatant, serum, plasma, saliva and cell/tissue lysate
Sample Volume	50 µl

Application Instructions

Assay Time	1 hour
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Properties

Form	96 well
Storage instruction	All reagents are stable at 4°C, except the standard, which should be stored at -20°C. For optimum storage, the standard should be aliquotted into smaller portions and then stored appropriately. Avoid repeated freeze/thaw cycles. Keep microplate wells sealed in a dry bag with desiccants. Do not expose test reagents to heat, sun or strong light during storage and usage. Please refer to the product user manual for detail temperatures of the components.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Background

8-hydroxy-2-deoxy Guanosine (8-OHdG) is produced by the oxidative damage of DNA by reactive oxygen and nitrogen species and serves as an established marker of oxidative stress. Hydroxylation of guanosine occurs in response to both normal metabolic processes and a variety of environmental factors (i.e., anything that increases reactive oxygen and nitrogen species). Increased levels of 8-OHdG are associated with the aging process as well as with a number of pathological conditions including cancer, diabetes, and hypertension. In complex samples such as plasma, cell lysates, and tissues, 8-OHdG can exist as either the free nucleoside or incorporated in DNA. Once the blood enters the kidney, free 8-OHdG is readily filtered into the urine, while larger DNA fragments remain in the bloodstream. Because of the complexity of plasma samples, urine is a more suitable matrix for the measurement of free 8-OHdG than plasma. Urinary levels of 8-OHdG range between 2.7-13 ng/mg creatinine, while plasma levels of free 8-OHdG have been reported to be between 4-21 pg/ml as determined by LC-MS.

Highlight

Related products:

[8-OHdG antibodies](#); [8-OHdG ELISA Kits](#);

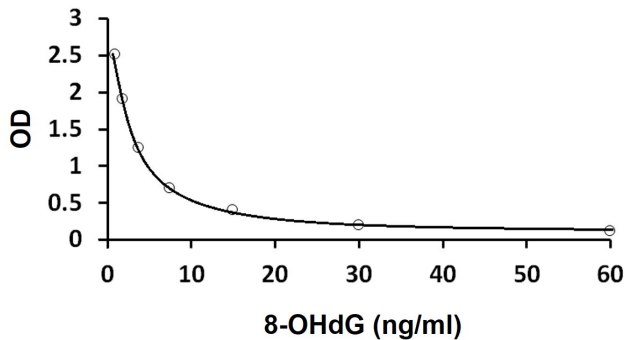
New ELISA data calculation tool:

[Simplify the ELISA analysis by GainData](#)

Research Area

Gene Regulation kit

Images



ARG80911 8 Hydroxyguanosine (8-OHdG) ELISA Kit standard curve image

ARG80911 8 Hydroxyguanosine (8-OHdG) ELISA Kit results of a typical standard run with optical density reading at 450 nm.