

biotechne®

Oxidative Stress Kits



R&D SYSTEMS
a biotechne® brand

Trevigen®

Oxidative Stress

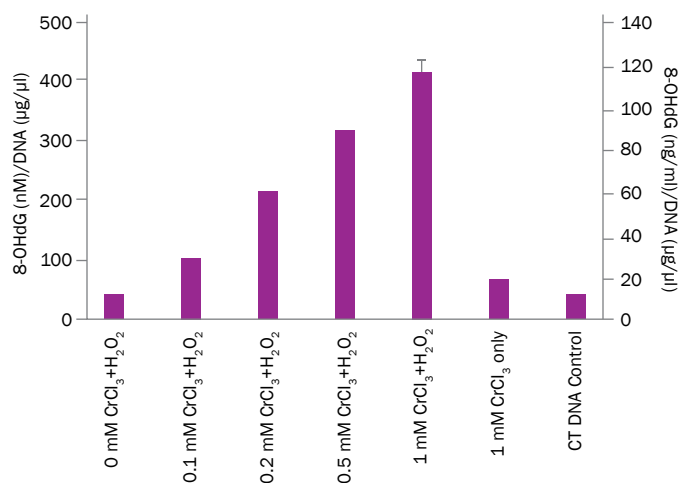
Oxidative stress represents an imbalance between the production and manifestation of reactive oxygen species and the ability for a biological system to readily detoxify the reactive intermediates or to repair the resulting damage. Disturbances in the normal redox state of tissues can cause toxic effects through the production of peroxides and free radicals that damage all components of the cell, including proteins, lipids, and DNA. Oxidative damage, induced by oxidative stress, has been implicated in the cause of many diseases and also has an impact on the aging process.

8-oxo-dG ELISA Kits

8-hydroxy-2'-deoxyguanosine (8-oxo-dG, 8-OHdG) is a modified nucleoside, which is the most commonly studied and detected by-product of DNA damage caused by oxidative radicals associated with inflammation, carcinogenesis, Parkinson's and Alzheimer's diseases, and also aging. 8-oxo-dG can serve as a sensitive indicator of physiological and environmental damage to DNA.

Kit Features

- Validated for many sample types
- Competitive ELISA
- Colorimetric readout
- 2.25 hour assay time

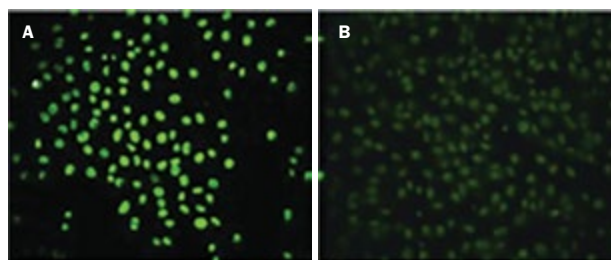


Formation of 8-oxo-dG in calf thymus DNA by CrCl₃ + H₂O₂. Calf thymus DNA was treated with 0–1 mM CrCl₃ plus 0.5 mM H₂O₂. The reaction was terminated by ethanol precipitation and DNA digested by DNase I and Alkaline Phosphatase. 8-oxo-dG concentration was measured according to assay protocol.

Description	Sample Types	Sensitivity	No. Tests	Catalog No.
8-oxo-dG ELISA II	DNA, Plasma, Urine, Saliva	0.9–57 ng/ml	96	4380-096-K
8-oxo-dG ELISA II	DNA, Plasma, Urine, Saliva	0.9–57 ng/ml	192	4380-192-K

Related Products

Description	Applications	Size	Catalog No.
Anti-8-oxo-dG Monoclonal Antibody (clone 15A3)	ELISA, ICC, IHC	50 µl	4354-MC-050



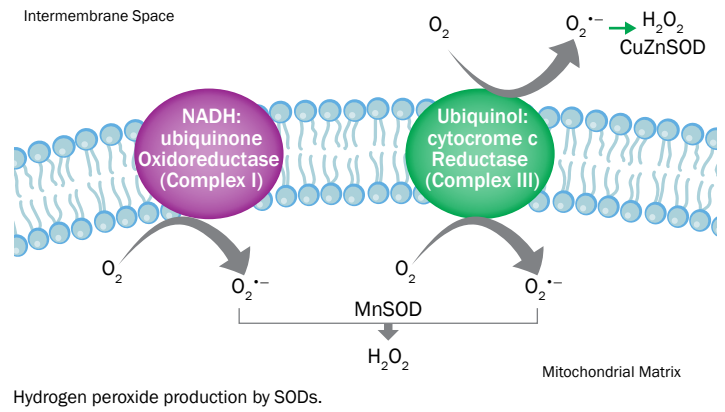
H₂O₂ treated (A) and untreated (B) MCF-10A cells stained with 8-oxo-dG antibody according to Trevigen's provided protocol, which uses an AlexaFluor[®] 488-conjugated anti-mouse antibody.

Superoxide Dismutase Assay Kit

Superoxide Dismutases (SODs) catalyze the dismutation of the superoxide radical into hydrogen peroxide and elemental oxygen, which diffuses into the inter-membrane space or mitochondrial matrix, and thus, SODs provide an important defense against the toxicity of superoxide radicals.

Kit Features

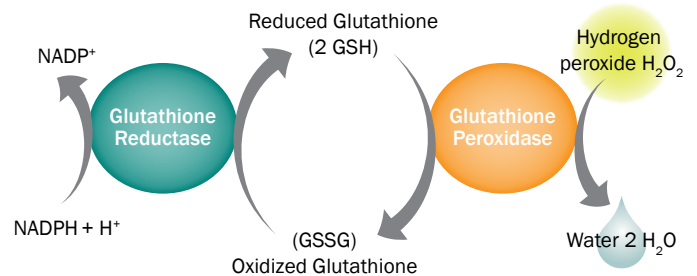
- Suitable for the assay of (Mn²⁺)-SOD, (Fe²⁺)-SOD, and (Cu/Zn)-SOD
- 96 well plate based format
- Colorimetric



Description	Sample Types	Sensitivity	No. Tests	Catalog No.
HT Superoxide Dismutase Assay Kit	Cell and tissue extracts	0.1–10 Units of SOD 0.5–50 µg of lysate	480 (5 plates)	7501-500-K
Superoxide Dismutase Assay Kit	Cell and tissue extracts	0.1–10 Units of SOD 0.5–50 µg of lysate	100 Tests (cuvette)	7500-100-K

Glutathione Assay Kits

- The ratio of reduced glutathione to oxidized glutathione within cells is often used as a measure of cellular toxicity.
- Oxidative stress may be a factor underlying the pathophysiology of bipolar disorder (BD), major depressive disorder (MDD), and schizophrenia (SCZ).
- In healthy cells and tissue, more than 90% of the total glutathione pool is in the reduced form (GSH) and less than 10% exists in the disulfide form (GSSG).



Description	Sample Types	Sensitivity	No. Tests	Catalog No.
Glutathione (measures total, reduced or oxidized)	Cell Lysate, Plasma, Saliva, Tissue Lysate, Urine	12.5–100 pmoles of GSSG	384 (4 plates)	7511-100-K
Glutathione Peroxidase	Cell Lysates, Plasma, Erythrocyte Lysates, Tissue Homogenates	N/A, cycling reaction	480 (5 plates)	7512-100-K
Glutathione Reductase	Cell Extracts, Tissue Homogenates	1–10 mUnits/ml 0.5–50 µg of lysate	480 (5 plates)	7513-500-K

Related Products

PARP and Tankyrase Kits

Kit	Size	Detection	Sensitivity	Catalog No.
PARP <i>in vivo</i> Pharmacodynamic Assay Kit II	96 Wells	Chemiluminescent	2 pg/ml	4520-096-K
Universal PARP Assay Kit	96 Wells	Chemiluminescent	0.01 Units	4676-096-K
Universal PARP Assay Kit	96 Wells	Colorimetric	0.01 Units	4677-096-K
PARP Apoptosis Assay Kit	96 Wells	Chemiluminescent	0.1 mUnits	4685-096-K
PARP Apoptosis Assay Kit	96 Wells	Colorimetric	0.1 mUnits	4684-096-K
Fluorescent Homogeneous PARP Inhibition Assay Kit	96 Wells	Fluorescent	10% inhibition	4690-096-K
Tankyrase 1 Activity Assay	96 Wells	Chemiluminescent	0.1 mUnits	4701-096-K
Tankyrase 1 Activity Assay	96 Wells	Colorimetric	0.1 mUnits	4700-096-K

CometAssay®/CometChip® Kits & Analysis Software

Kit	Size	Catalog No.
CometAssay Kit	50 Samples (25 x 2 Well Slides)	4250-050-K
CometAssay Silver Kit	50 Samples (25 x 2 Well Slides)	4251-050-K
CometAssay HT Sample Kit	40 Samples (2 x 20 Well Slides)	4252-040-K
CometAssay 96 Well Kit	96 Samples (1 x 96 Well Slide)	4253-096-K
CometChip Starter Kit	96 Samples	4260-096-CSK
Comet Analysis Software	1 License	4260-000-CS

DePsipher™ Products

Product	Size	Catalog No.
DePsipher (2.5mg/ml)	100 µl	6300-100-01
DePsipher Kit	100 Tests	6300-100-K

R&D SYSTEMS

NOVUS
BIOLOGICALS

TOCRIS

protein
simple

A&C

bio-techne

Global info@bio-techne.com bio-techne.com/find-us/distributors TEL +1 612 379 2956
North America TEL 800 343 7475 Europe | Middle East | Africa TEL +44 (0)1235 529449
China info.cn@bio-techne.com TEL +86 (21) 52380373

bio-techne.com

