

Cell Damage & Oxidative Stress Products

All living cells try to maintain a normal reduced environment. When this state is lost due to the production of reactive oxygen species (ROS) like peroxides and free radicals, there is considerable damage to the cell components like proteins, lipids and DNA. These cells are thus under oxidative stress, which disturbs the equilibrium between the products of such ROS and the cells capacity to steadily detoxify these reactive intermediates, and also re-pair the damage that has been caused to them. These oxidizing species include the more reactive ones like free radicals and peroxides and the less reactive ones like superoxides. The more reactive ones cause permanent cell damage which eventually triggers apoptosis and the greatest levels of stress triggers necrosis. The less reactive superoxides can be converted by oxidoreductases into more aggressive intermediates which cause extensive cell damage. In normal metabolic cells, these ROS are produced at very low levels and the damage caused is instantly repaired. Intense oxidative stress on the other hand results in ATP depletion, necrosis or controlled apoptotic death. The antioxidant enzymes within the cells like catalase, superoxide dismutase (SOD), lactoperoxidases and glutathione peroxidase inhibit the production of such free radicals and thus protect cells in order to maintain the balance. Oxidative stress is a hallmark of a number of diseases including Alzheimer's disease, Parkinson's disease, Sickle cell disease, heart failure, myocardial infarction, Schizophrenia, fragile X syndrome, diabetes, cancer, cardiovascular disease and chronic fatigue syndrome. These pathological changes in the cells primarily occur due to DNA damage, oxidation of amino acids, proteins, polyunsaturated fatty acids and enzyme cofactors which subsequently causes cell death due to apoptosis or necrosis. BioVision has a number of kits, antibodies, proteins and antioxidants in this behalf to help researchers study and understand the detailed mechanisms on this front.

Assay Kits

Product Name	Cat. No.	Size
Acid Phosphatase Cell Cytotoxicity Assay Kit	K937	500 assays
Total Antioxidant Capacity (TAC) Colorimetric Assay Kit	K274	100 assays
L-Arginine Assay Kit (Colorimetric)	K749	100 assays
Ascorbic Acid Colorimetric Assay Kit II (FRASC)	K671	100 assays
Ascorbic Acid Colorimetric/Fluorometric Assay Kit	K661	100 assays
Asparagine Assay Kit (Colorimetric)	K736	100 assays
Cardiolipin Assay Kit (Fluorometric)	K944	100 assays
Catalase Activity Colorimetric/Fluorometric Assay Kit	K773	100 assays
Crystal Violet Cell Cytotoxicity Assay Kit	K329	1000 assays
Cystathionine β Synthase Activity Assay Kit (Fluorometric)	K998	100 assays
Cystathionine β Synthase Inhibitor Screening Kit (Fluorometric)	K695	100 assays
DNA Damage Quantification Colorimetric Kit	K253	25 assays
Ethanol Colorimetric/Fluorometric Assay Kit	K620	100 assays
Ferric Reducing Antioxidant Power (FRAP) Assay Kit (Colorimetric)	K515	200 assays
Gamma Glutamyl Transferase (GGT) Activity Colorimetric Assay Kit	K784	100 assays
Gamma Glutamyl Transferase (GGT) Activity Fluorometric Assay Kit	K785	100 assays
Glutamate Colorimetric Assay Kit	K629	100 assays
Glutathione (GSH/GSSG/Total) Fluorometric Assay Kit	K264	100 assays
Glutathione Colorimetric Assay Kit	K261	100 assays
Glutathione Fluorometric Assay Kit	K251	100 assays

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Assay Kits

Product Name	Cat. No.	Size
Glutathione Peroxidase Activity Colorimetric Assay Kit	K762	100 assays
GST Colorimetric Activity Assay Kit	K263	100 assays
GST Fluorometric Activity Assay Kit	K260	100 assays
HAT (H4) Activity Fluorometric Assay Kit	K336	100 assays
HAT Activity Colorimetric Assay Kit	K332	100 assays
HAT Activity Fluorometric Assay Kit	K334	100 assays
HDAC Activity Colorimetric Assay Kit	K331	100 assays
HDAC Activity Fluorometric Assay Kit	K330	100 assays
HDAC Inhibitor Drug Screening Kit (Fluorometric)	K340	100 assays
HDAC-5 Inhibitor Screening Kit (Fluorometric)	K171	100 assays
Human Thioredoxin 1 (Trx1) Inhibitor Screening Kit (Fluorometric)	K535	100 assays
Hydrogen Peroxide Colorimetric/Fluorometric Assay Kit	K265	200 assays
Inosine Fluorometric Assay Kit	K712	100 assays
InSitu HDAC Activity Fluorometric Assay Kit	K339	100 assays
Intracellular Hydrogen Peroxide Detection Kit (cell-based)	K204	200 assays
EZCell™ Intracellular Nitric Oxide Synthase (NOS) Detection Kit	K207	100 assays
LDH-Cytotoxicity Colorimetric Assay Kit	K311	400 assays
LDH-Cytotoxicity Colorimetric Assay Kit II	K313	500 assays
Lipid Peroxidation (MDA) Colorimetric/Fluorometric Assay Kit	K739	100 assays
Lysophosphatidylcholine Assay Kit (Colorimetric/Fluorometric)	K735	100 assays
Malate Colorimetric Assay Kit	K637	100 assays
Monoacylglycerol Lipase (MAGL) Activity Assay Kit (Fluorometric)	K561	100 assays
Myeloperoxidase (MPO) Colorimetric Activity Assay Kit	K744	100 assays
Myeloperoxidase (MPO) Fluorometric Activity Assay Kit	K745	100 assays
Myeloperoxidase (MPO) Inhibitor Screening Kit (Fluorometric)	K746	200 assays
NAD/NADH Quantitation Colorimetric Kit	K337	100 assays
EZScreen™ NAD ⁺ /NADH Colorimetric Assay Kit (384-well)	K958	400 assays
Nitric Oxide Cell-Based HTS Assay Kit	K979	100 assays
Nitric Oxide Colorimetric Assay Kit	K262	200 assays
Nitric Oxide Fluorometric Assay Kit	K252	200 assays
Nitric Oxide Synthase (NOS) Activity Assay Kit (Colorimetric)	K205	100 assays
Nitric Oxide Synthase (NOS) Activity Assay Kit (Fluorometric)	K206	100 assays
Nitric Oxide Synthase (NOS) Inhibitor Screening Kit (Fluorometric)	K208	100 assays
Nitrite Assay Kit (Griess Reagent)	K544	200, 500, 1000 assays
Paraoxonase 1 (PON1) Activity Assay Kit (Fluorometric)	K999	100 assays
Peroxidase Activity Colorimetric/Fluorometric Assay Kit	K772	100 assays
Phenolic Compounds Assay Kit (Colorimetric)	K527	200 assays
Phosphatidylethanolamine Assay Kit (Fluorometric)	K499	100 assays
Phosphatidylserine Assay Kit (Fluorometric)	K565	100 assays
6-Phosphogluconate Dehydrogenase Activity Colorimetric Assay Kit	K540	100 assays
Phospho-p38 MAPK (Thr ¹⁸⁰ +Tyr ¹⁸²) Translocation Assay Kit (Cell-Based)	K965	100 assays
PicoProbe™ Phosphatidic Acid Assay Kit (Fluorometric)	K748	100 assays
PicoProbe™ Glutamate Assay Kit (Fluorometric)	K413	100 assays
Proteasome Activity Fluorometric Assay Kit	K245	100 assays
Protein Disulfide Isomerases (PDI) Inhibitor Screening Kit (Fluorometric)	K840	100 assays

Assay Kits

Product Name	Cat. No.	Size
Reactive Oxygen Species (ROS) Detection Assay Kit	K936	100, 250 assays
SIRT2 Inhibitor Screening Assay Kit (Fluorometric)	K322	100 assays
Sulforhodamine B Cell Cytotoxicity Assay Kit (Colorimetric)	K943	1000 assays
Superoxide Dismutase (SOD) Activity Colorimetric Assay Kit	K335	100 assays
Thioredoxin Reductase Activity Colorimetric Assay Kit	K763	100 assays
Uric Acid Colorimetric/Fluorometric Assay Kit	K608	100 assays
Xanthine Oxidase Activity Colorimetric/Fluorometric Assay Kit	K710	100 assays
Xanthine/Hypoxanthine Colorimetric/Fluorometric Assay Kit	K685	100 assays

Antibodies

Product Name	Cat. No.	Size
Anti-APIP Antibody	A1766	100 µl
Anti-GSTP1 Antibody	A1003	100 µg
ApoE2 Antibody	5760	30 µg, 100 µg
ApoE3 Antibody	5696	30 µg, 100 µg
ApoE4 Antibody	5699	30 µg, 100 µg
Calnexin Antibody	3811	30 µg, 100 µg
Catalase Antibody	3806	30 µg, 100 µg
Catalase Antibody (Center)	6727	100 µl
c-Jun antibody	3009	30 µg, 100 µg
c-Jun Antibody	3702	100 µg
Cox-1 Antibody	3361	30 µg, 100 µg
Cox-2 Antibody	3362R	30 µg, 100 µg
Cox-3 Antibody	3687	30 µg, 100 µg
Cox-4 Antibody	3638	30 µg, 100 µg
Cytochrome P450 Antibody	3084R	30 µg, 100 µg
eNOS Antibody	3426R	30 µg, 100 µg
GST-Tag Antibody	3997	30 µg, 100 µg
Heme Oxygenase-1 Antibody	3391	30 µg, 100 µg
Heme Oxygenase-2 Antibody	3392	30 µg, 100 µg
Hemopexin Polyclonal Antibody	7016	30 µg, 100 µg
Lactalbumin Antibody	7006	30 µg, 100 µg
Myeloperoxidase (MPO) Antibody	3831	30 µg, 100 µg
Nitrotyrosine Antibody	5416	50 µl
Nitrotyrosine Antibody (7A5)	5413	50 µg
Nitrotyrosine Antibody (HM11)	5414	50 µg
Nitrotyrosine Antibody (NOY-7A5)	5415	50 µg
PDI (Protein Disulfide Isomerase) Antibody	5601	30 µg, 100 µg
Phospho-c-Jun (Ser73) Antibody	3502	100 µg
Phospho-JNK/SAPK Antibody	3589	30 µg, 100 µg
RANTES Antibody	5323	100 µg
Superoxide Dismutase (SOD-1) Antibody	3458	30 µg, 100 µg
Superoxide Dismutase 1 (SOD-1) Antibody	6641	30 µg, 100 µg
Thioredoxin Reductase 1 (TXNRD1) Antibody	7005	30 µg, 100 µg

Biochemicals

Product Name	Cat. No.	Size	CAS. No.
Allicin	B2960	1 mg, 5 mg	539-86-6
Astragalin	B2964	1 mg, 5 mg	480-10-4
Bisdemethoxycurcumin	B2944	50 mg, 250 mg	24939-16-0, 33171-05-0
Carnosic Acid	2075	5 mg, 25 mg	3650-09-7
Celastrol	1940	5 mg, 25 mg	34157-83-0
Curcumin, Curcuma longa (High Purity)	1850	10 mg, 50 mg	458-37-7
Daidzein	B2906	50 mg, 250 mg	486-66-8
Deferoxamine Mesylate	1883	500 mg, 1 g	138-14-7
Delphinidin (chloride)	B2807	1 mg, 5 mg	528-53-0
Demethoxycurcumin	B2945	5 mg, 25 mg	24939-17-1, 22608-11-3
Ebselen	2169	5 mg, 25 mg	60940-34-3
(-)-Epigallocatechin gallate	1841	50 mg	989-51-5
FeTPPS	2065	25 mg, 100 mg	90384-82-0
Genistein	1533	10 mg, 100 mg	446-72-0
Genistin	1535	10 mg	529-59-9
IPAM	1817	100 mg, 500 mg, 1 g	5814-93-7
Luteolin	2005	5 mg, 25 mg	491-70-3
MnTBAP Chloride	2058	10 mg, 50 mg	55266-18-7
MnTMPyP Pentachloride	2056	10 mg, 50 mg	100012-18-8
Naringenin	1772	250 mg, 1 g	480-41-1
Oxidized Glutathione (GSSG)	1241	1 g	27025-41-8
Piceatannol	2072	5 mg, 25 mg	10083-24-6
Piperlonguminine	1988	10 mg, 50 mg	5950-12-9
Probucol	B2968	100 mg, 500 mg	23288-49-5
Pterostilbene	2073	5 mg, 25 mg	537-42-8
Quercetin, Dihydrate	1773	250 mg, 1 g	6151-25-3
Reduced Glutathione (GSH)	1242	1 g	70-18-8
Resveratrol	1758	100 mg, 500 mg	501-36-0
Rhapontigenin	2074	1 mg, 5 mg	500-65-2
Rosmarinic Acid	1843	50 mg, 250 mg	20283-92-5
RTA 408	B2860	5 mg, 25 mg	1474034-05-3
Skyrin, Talaromyces sp.	2043	1 mg	602-06-2
Sulforaphane	B2801	5 mg, 25 mg	4478-93-7
Tiliroside	1879	1 mg, 5 mg	20316-62-5
Trolox	2076	50 mg, 250 mg	53188-07-1
Wogonoside	B2953	5 mg, 25 mg	51059-44-0

ELISA Kits

Product Name	Cat. No.	Size
Aflatoxin B1 (AFB1) ELISA Kit	K4208	100 assays
Aldehyde Dehydrogenase, Mitochondrial (ALDH2)(Human) ELISA Kit	E4587	100 assays
AMPK (Human) ELISA Kit	E4280	100 assays
Cathepsin G (CTSG) (Human) ELISA Kit	E4639	100 assays
Cathepsin G (CTSG) (Rat) ELISA Kit	E4640	100 assays
Fluoroquinolones ELISA Kit	K4205	100 assays

ELISA Kits

Product Name	Cat. No.	Size
Gentamicin ELISA Kit	K4206	100 assays
Glutathione peroxidase 1 (Human) ELISA Kit	K4225	100 assays
Glutathione Reductase (GR)(Human) ELISA Kit	E4623	100 assays
Glutathione Reductase (GR)(rat) ELISA Kit	E4625	100 assays
Glutathione Reductase, mitochondrial (Mouse) ELISA Kit	E4624	100 assays
HIF-1 alpha (Human) ELISA Kit	E4285	100 assays
4-Hydroxynonenal (4-HNE) ELISA Kit	E4645	100 assays
Kanamycin ELISA Kit	K4210	100 assays
Melatonin ELISA Kit	E4630	100 assays
MGMT (Human) ELISA Kit	K4196	100 assays
Monoacylglycerol Lipase Inhibitor Screening Kit (Fluorometric)	K474	100 assays
Myeloperoxidase (MPO)(Human) ELISA Kit	E4579	100 assays
Myeloperoxidase (MPO)(Mouse) ELISA Kit	E4580	100 assays
Myeloperoxidase (MPO)(Rat) ELISA Kit	E4581	100 assays
Neutral Red Cell Cytotoxicity Assay Kit	K447	1000 assays
NOS2 / iNOS (Human) ELISA Kit	E4648	96 assays
NOS2 / iNOS (mouse) ELISA Kit	E4691	96 assays
NOS2 / iNOS (Rat) ELISA Kit	E4649	96 assays
NOS3 / eNOS (Human) ELISA Kit	E4650	96 assays
NOS3 / eNOS (Mouse) ELISA Kit	E4651	96 assays
NOS3 / eNOS (Rat) ELISA Kit	E4652	96 assays
NQO1 (human intracellular) ELISA Kit	K4926	100 assays
8-oxoguanine DNA glycosylase (OGG1)(Human) ELISA Kit	E4632	100 assays
p53 (human) ELISA Kit	K4829	100 assays
PARP1 (Human) ELISA Kit	K4218	100 assays
Platelet Activating Factor (PAF) ELISA Kit	E4631	100 assays
Quinolone ELISA Kit	E4530	100 assays
Salbutamol (SALB) ELISA Kit	K4209	100 assays
Soluble Epoxide Hydrolase Activity Assay Kit (Fluorometric)	K477	100 assays
Soluble Epoxide Hydrolase Inhibitor Screening Kit (Fluorometric)	K480	100 assays
Sulfonamides residue ELISA Kit	K4207	100 assays
Superoxide Dismutase 1 (SOD1)(Human) ELISA Kit	E4582	100 assays
Superoxide Dismutase 1 (SOD1)(Mouse) ELISA Kit	E4583	100 assays
Superoxide Dismutase 1 (SOD1)(Rat) ELISA Kit	E4584	100 assays
Vitamin D3 (human) ELISA kit	K4806	100 assays

Proteins

Product Name	Cat. No.	Size
ApoE2, human recombinant	4760	50 µg, 100 µg, 500 µg, 1mg, 5 mg
ApoE3, human recombinant	4696	50 µg, 100 µg, 500 µg, 1mg, 5 mg
ApoE4, human recombinant	4699	50 µg, 100 µg, 500 µg, 1mg, 5 mg
Apolipoprotein AII, Human Plasma	7281	500 µg
Apolipoprotein AIV, Human Plasma	7282	50 µg

Proteins

Product Name	Cat. No.	Size
Apolipoprotein B, Human Plasma	7283	500 µg
Apolipoprotein E, Human Plasma	7284	50 µg
Chylomicrons, Human Plasma	7285	1 mg
c-Jun (1-79)-GST Fusion Protein	7001	100 µg
FGF-18, human recombinant	4082	25 µg, 100 µg, 1 mg
GSTA4, human recombinant	7800	100 µg
GSTM3, human recombinant	7801	100 µg
GSTM5, human recombinant	7802	100 µg
Hemopexin, Human Plasma	7544	1 mg
Human CellExp™ Hemopexin, Human Recombinant	P1210	10 µg, 50 µg
Hemopexin, Rat Serum	7545	100 µg
Human Recombinant Thioredoxin	6305	100 µg
Lactoferrin, Human Neutrophil	4092	100 µg
Myeloperoxidase, Human Neutrophil	4744	100 µg
PPM1F, human recombinant	7810	100 µg
Protein Disulfide Isomerase (PDI), human recombinant	7601	100 µg, 1 mg, 5 mg
RANTES, human recombinant	4321	20 µg, 100 µg, 1 mg
RANTES, murine recombinant	4322	20 µg, 1 mg
RANTES, rat recombinant	4323	20 µg, 100 µg, 1 mg
Sirtuin 2, human recombinant	7632	20 µg, 100 µg, 1 mg
Thioredoxin isoform 1 (Trx), Active, Human Recombinant	P1039	100 µg

Glutathione & Related Products

Product Name	Cat. No.	Size
EZCell™ Glutathione Detection Kit (Blue Fluorescence)	K504	100 assays
Glutathione Peroxidase Activity Colorimetric Assay Kit	K762	100 assays
Glutathione Reductase (GR)(Human) ELISA Kit	E4623	100 assays
Glutathione Reductase (GR)(rat) ELISA Kit	E4625	100 assays
Glutathione Reductase Activity Colorimetric Assay Kit	K761	200 assays
Glutathione Reductase, mitochondrial (Mouse) ELISA Kit	E4624	100 assays
GST Colorimetric Activity Assay Kit	K263	100 assays
Methylglyoxal Assay Kit (Colorimetric)	K500	100 assays
PicoProbe™ Methylglyoxal Assay Kit (Fluorometric)	K461	100 assays
Reduced Glutathione (GSH) Assay Kit (Colorimetric)	K464	100 assays
PicoProbe™ Reduced Glutathione (GSH) Assay Kit (Fluorometric)	K740	100 assays

Other Related Products

Activators

Product Name	Cat. No.	Size
Homocysteine ELISA Kit	E4543	100 assays

Inhibitors

Product Name	Cat. No.	Size	CAS. No.
A77 1726	1973	5 mg, 25 mg	108605-62-5
BAY 58-2667 Hydrochloride	2027	1 mg	1240669-95-7
Celecoxib	1574	100 mg, 1 g	169590-42-5

Inhibitors

Product Name	Cat. No.	Size	CAS. No.
Coumarin-SAHA	B2805	1 mg, 5 mg	1260635-77-5
EUK-118	2173	5 mg, 25 mg	186299-34-3
EUK-124	2174	5 mg, 25 mg	186299-35-4
EUK-134	2175	5 mg, 25 mg	81065-76-1
GSNO	1580	25 mg, 100 mg	57564-91-7
GST Inhibitor-1 (Cibacron Blue 3G-A, Sodium Salt)	1555R	1 g	84166-13-2
GST Inhibitor-2 (Ethacrynic acid)	1556	1 g	58-54-8
8-Hydroxy-2'-deoxyguanosine	2177	1 mg, 5 mg	88847-89-6
8-Hydroxyguanosine	2176	1 mg, 5 mg	3868-31-3
4-Hydroxynonenal	2083	1 mg, 5 mg	75899-68-2
Iberin	N2827	1 mg, 5 mg	505-44-2
Myeloperoxidase Inhibitor	1977	100 mg, 500 mg	5351-17-7
NOC-18	2492	10 mg, 50 mg	146724-94-9
ODQ	2051	10 mg, 50 mg	41443-28-1
Thioredoxin 1 (Trx) Fluorometric Substrate, Di- FITC oxidized glutathione (FGSSGF)	9699	200 assays	-
1400W dihydrochloride	2055	5 mg, 25 mg	214358-33-5
YC-1	2061	5 mg, 25 mg	170632-47-0

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