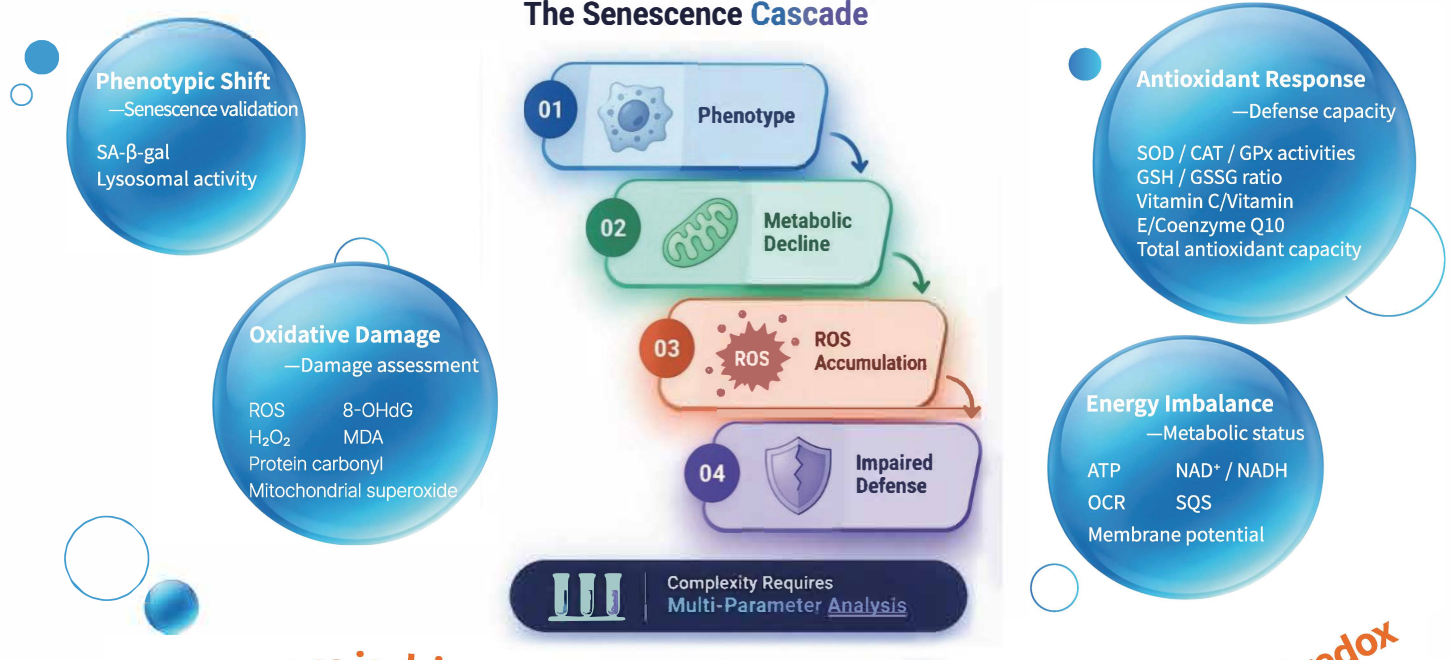


Inside Cellular Aging

Integrated Insights into Metabolism, Oxidative Damage, and Cellular Defense

Biological Progression of Senescence Framework

The Senescence Cascade



Senescence is driven by metabolic decline, oxidative damage, and redox
 40+ validated indicators enable precise, end-to-end quantification.

Where It Applies

Basic Research

Decodes mechanisms linking metabolism, ROS, and senescence



Drug Screening

Identify candidates targeting oxidative stress and mitochondrial dysfunction



Natural Products

Validate anti-aging efficacy of plant extracts and probiotics



Biomarker Analysis

Quantifies intervention outcomes in blood and tissue samples



Flagship Assays

Cellular Senescence Fluorometric Assay Kit (E-BC-F086)

Reliable Phenotype Validation

- high sensitivity, strong signal retention
- cell-permeable, simple workflow, Flow Cytometry-Ready

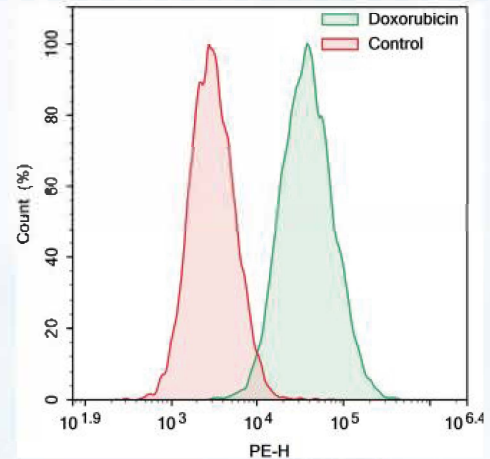


Fig 1. Doxorubicin-induced senescence in WI-38 cells vs control

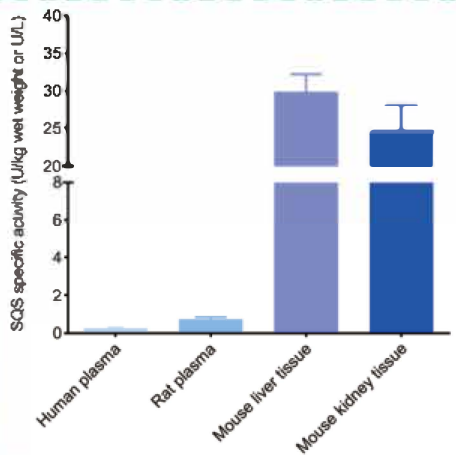


Fig 2. SQS activity across multiple sample types

Squalene Synthase (SQS) Activity Colorimetric Assay Kit (E-BC-K794-M)

Links Lipid Metabolism to Aging Pathways

- low input (10 μ L), broad sample compatibility
- high accuracy, reliable recovery across dilutions

Popular Senescence-Related Assays

Cellular Senescence Phenotype

Cellular Senescence (E-BC-F086), OCR (E-BC-F070), ECAR (E-BC-F069), FAO (E-BC-K784-M), Lysosomal (E-BC-F202), NAD⁺/NADH (E-BC-K804-M)

Oxidative Damage

8-OHdG (E-EL-0028), Hydroxyl Free Radical Scavenging Capacity (E-BC-K042-M), MDA (E-BC-K025-M), Mitochondrial Superoxide (E-BC-F008), ROS (E-BC-F005)

Antioxidant Defense

SQS (E-BC-K794-M), TAS (E-BC-K801-M), T-GSH & Reduced GSH (E-BC-F045), TOS (E-BC-F008), T-SOD (E-BC-K020-M)

Others

HYP (E-BC-K062-M), SIRT-1 (E-BC-F056)

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