Product Data Sheet

AOPP-Human Serum Albumin (AOPP-HSA)

CATALOG NUMBER: STA-319 **STORAGE:** -20ºC

QUANTITY AND CONCENTRATION: 50 µL of 7.5 mg/mL AOPP-HSA in 1X PBS at 0.136 µmol AOPP/mg proteins.

SHELF LIFE: 1 year from receipt under proper storage conditions; aliquot to avoid multiple freeze thaw cycles

Background

Oxidative stress is defined as an increase in the production of reactive oxygen species (ROS) due to an imbalance between antioxidant and oxidants. Advanced Oxidation Protein Products (AOPP) are uremic toxins created during oxidative stress through the reaction of chlorinated oxidants, such as chloramines and hypochlorous acid, with plasma proteins. AOPPs are structurally similar to Advanced Glycation End-Product (AGE) proteins and exert similar biological activities. AOPPs are elevated in patients with renal complications, atherosclerosis, diabetes mellitus, systemic sclerosis, as well as HIV-positive patients. Human Serum Albumin (HSA) treated with HOCl and AOPP generated *in vivo* can ignite oxidative reactions in both neutrophils and monocytes, which indicates both can be used as true mediators of inflammation. Although the mechanisms of AOPP degradation and elimination from the blood remain to be fully elucidated, it appears that the liver and spleen are mostly responsible for their isolation and removal.

Application

Cell Biolabs' AOPP-HSA Conjugate is a simple, reproducible, and consistent control for assays measuring the detection of advanced oxidation protein products in plasma, lysates, and tissue homogenates. The AOPP-HSA concentration was determined from a Chloramine equivalence standard (Cat. #STA-318).

Example of Results

The following figures demonstrate typical results. One should use the data below for reference only. This data should not be used to interpret actual results.

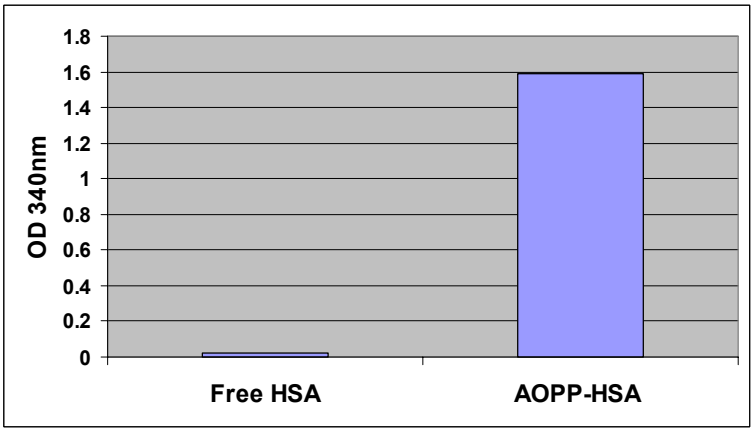

Figure 1: AOPP-HSA Tested with AOPP Assay Kit. The AOPP-HSA control and untreated Human Serum Albumin were both prepared at a concentration of 100 micromolar and tested with Cat. #STA-318 according to the assay protocol.

References

1. Deschamps-Latscha B. et al. (2005) *Am. J. Kidney Dis.* 45(1): 39-47.
2. Servettaz, A. et al. (2007) *Ann. Rheum. Dis.* 66: 1202-1209.
3. Witko-Sarsat, V. et al. (1996) *Kidney International* 49: 1304-1313.

Warranty

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