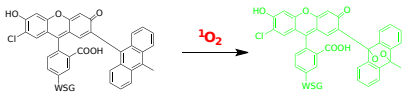
SO Green™ 520WS Singlet Oxygen Sensor *Water-Soluble for Extracellular Applications*

Catalog Number: 16061
Unit Size: 10x100 ug

Product Details

Storage Conditions	Freeze (< -15 °C), Minimize light exposure
Expiration Date	24 months upon receiving

Chemical Properties

Appearance	Solid red purple
Molecular Weight	910.52
Soluble In	DMSO
Chemical Structure	

Spectral Properties

Excitation Wavelength	N/A
Emission Wavelength	N/A

Applications

SO Green™ 520WS Singlet Oxygen Sensor has been developed as a water-soluble fluorescent probe for detecting extracellular singlet oxygen since it is cell-impermeant. It is highly selective for singlet oxygen. Unlike other available fluorescent and chemiluminescent singlet oxygen detection reagents, SO Green™ 520WS Singlet Oxygen Sensor does not show any appreciable response to hydroxyl radical, superoxide, or other reactive oxygen species (ROS). This indicator only exhibits weak blue fluorescence. It emits a strong green fluorescence (excitation/emission maxima ~504/525 nm) upon reaction with singlet oxygen. The PET quencher of SO Green™ 520WS Singlet Oxygen Sensor is eliminated (by singlet oxygen reaction) to recover its fluorescence. Singlet oxygen can be produced from many different sources such as dye photosensitizations. In mammalian biology, singlet oxygen is one of the ROS, which is linked to oxidation of LDL cholesterol and resultant cardiovascular effects. Polyphenol antioxidants can scavenge and reduce concentrations of reactive oxygen species and may prevent such deleterious oxidative effects. Ingestion of pigments capable of producing singlet oxygen with activation by light can produce severe photosensitivity of skin. This is especially a concern in herbivorous animals. Singlet oxygen is considered to be the active species in photodynamic therapy.