

Free Hydrogen Sulfide Gas Assay Kit

OxiSelect Free Hydrogen Sulfide Gas Assay Kit

CATALOG #
AAA44654

PRODUCT SYNONYMS

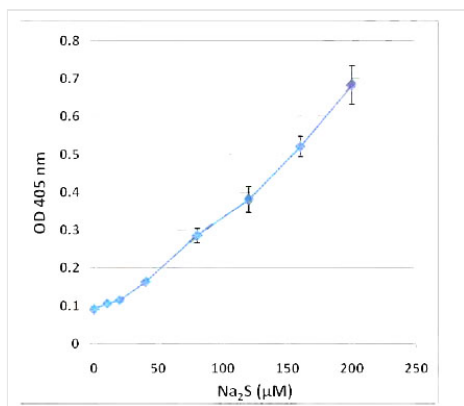
Free Hydrogen Sulfide Gas; OxiSelect Free Hydrogen Sulfide Gas Assay Kit; Free Hydrogen Sulfide Gas assay kit

PRODUCT SPECIFICATIONS

Preparation and Storage

Store the Sodium Sulfide at 4 degree C. Store all other components at room temperature.

IMAGES



Standard Curve (Sample)

ADDITIONAL INFORMATION

Related Product Information for Free Hydrogen Sulfide Gas assay kit	Background: Hydrogen sulfide (H2S) is a colorless gas containing a foul odor reminiscent of rotten eggs. High levels of H2S are corrosive, flammable and poisonous. H2S can be generated from the breakdown of organic matter by microbes when oxygen is not present (typically in swamps and sewers) by a process called anaerobic digestion. H2S can also be found in natural gas, emissions from volcanoes, and in water from some wells. The human body produces minute levels of H2S where the molecule functions as a gaseous messenger like carbon monoxide or nitric oxide. H2S acts as a cerebrovascular dilator and is produced by the enzyme cystathione gamma lyase. Through activation of potassium ATP channels, H2S can dilate arterioles. Furthermore, H2S stimulates vascular smooth cell apoptosis and blocks proliferation-based vascular remodeling. Finally, H2S has been shown to have neuroprotective and cardioprotective properties, lowering oxidative stress by increasing levels of glutathione by enhancing cystine and cysteine transport to neurons. The OxiSelect™ Free Hydrogen Sulfide Gas Assay Kit is a novel technique for measurement of free H2S gas emission. Liquid samples in a 96 well microplate release H2S gas into the air which is captured in a gel spot containing Ag+ ions on the underside of the microplate lid just above the sample (Figure 1). The resulting silver sulfide (Ag2S) produced inside the spot creates a brownish color (Figure 4A) that can be measured colorimetrically on a microplate spectrophotometer. Each kit provides sufficient reagents to perform up to 100 assays, including positive control and unknown samples. Principle of the Assay: The OxiSelect™ Free Hydrogen Sulfide Gas Assay Kit is a 96 well microplate based kit for simple detection of H2S gas emission. First, a solution containing silver nitrate is coated on the underside of a microplate lid to form a thin polymer capture surface (Figure 2). Samples producing H2S such as those containing an H2S donor, enzyme, cells, or tissue are pipetted into the wells of the microplate. The coated lid is then placed over the microplate so that the polymer rests just above each sample. H2S gas escapes from the sample in the well and enters the polymer coating. The Ag+ ions in the polymer react with the H2S gas to form Ag2S nanoparticles, producing a brown discoloration of the polymer film. After one hour, the coated lid is transferred to another empty microplate and then OD is measured at 405 nm.
Product Categories/Family for Free Hydrogen Sulfide Gas assay kit	Oxidative Stress/Damage ; Antioxidant Assays

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/assay-kits/free-hydrogen-sulfide-gas/44654>