Product Information Sheet

Ordering Information

Product Number: 186

Product Name: ICG Xtra-OSu

Unit Size: 1 mg

Storage Conditions: Freeze (<-15 °C), Desiccated, Avoid Light

Expiration Date: 12 months upon receiving

Chemical and Spectral Properties

Appearance: Solid

Molecular Weight: 1232.62

Soluble In: DMSO

Excitation Wavelength: 780

Emission Wavelength: 800

Application Notes

Indocyanine green (ICG) is a cyanine dye used in medical diagnostics. It is used for determining cardiac output, hepatic function, and liver blood flow, and for ophthalmic angiography. It has a peak spectral absorption at about 800 nm. These infrared frequencies penetrate retinal layers, allowing ICG angiography to image deeper patterns of circulation than fluorescein angiography. ICG binds tightly to plasma proteins and becomes confined to the vascular system. ICG has a half-life of 150 to 180 seconds and is removed from circulation exclusively by the liver to bile juice. AAT Bioquest offers a variety of ICG derivatives for preparing ICG bioconjugates. Among them the two most popular ones are ICG-Sulfo-OSu and ICG-OSu, which generate the identical bioconjugates upon reacting with biomolecules containing amino groups. However, some of our customers and our scientists found that the antibody conjugates from the reactions of ICG-Sulfo-OSu and ICG-OSu are extremely difficult to be separated from the ICG acid resulted from the spontaneous hydrolysis of ICG-Sulfo-OSu and ICG-OSu. ICG Xtra-OSu has been developed to address this problem. It has comparable binding properties to plasma proteins. The antibody conjugates from the reactions of ICG Xtra-OSu can be readily separated from the ICG Xtra acid by a simple desalting column or SEC columns, making the ICG Xtra-OSu conjugations much more robust and easier to perform. In addition, ICG Xtra conjugates have much better water solubility than the corresponding ICG conjugate, making ICG Xtra a superior replacement for ICG for preparing the conjugates with hydrophobic antibodies.