

Product Number
926-27000

Storage: -20 °C
prior to reconstitution;
4 °C after reconstitution

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BrightSite
Small Animal Imaging Agents

IRDye® 800CW YC-27 Optical Probe

IRDye 800CW YC-27 from LI-COR Biosciences is a near-infrared dye-labeled imaging agent specifically designed to target prostate specific membrane antigen (PSMA), also known as folate hydrolase I or glutamate carboxypeptidase II. This small molecule can be used as an optical imaging agent for *in vitro*, *in vivo*, whole organ, and tissue section analysis, allowing the same probe to be used in all steps of the biomarker discovery process.

Description

PSMA is a type II glycoprotein that is over-expressed in prostate cancer, including metastatic disease. PSMA is also expressed on the tumor vascular endothelium of virtually all solid carcinomas and sarcomas but not on normal vascular endothelium. This expression suggests a potential mechanism for specific targeting of tumor-associated neovasculature (1-5). IRDye 800CW YC-27 (urea-based small molecule; MW 1743) has been characterized for *in vitro* and *in vivo* use with a number of tumor cell lines which include LNCaP, 22Rv1, PC3M-LN4 (prostate carcinomas), PC3-PIP (PC3 cells transfected with PSMA), and PC3-flu (PSMA-). These characteristics make it ideal for preclinical evaluation of PSMA-expressing tissue such as prostate tumors.

Material

The IRDye 800CW YC-27 Optical Probe solution was passed through a 0.2 µm nylon membrane into a sterile polypropylene tube and lyophilized. The reagent is supplied as a lyophilized powder. The recommended individual dose per mouse (~25 grams body weight) is 0.5 nmole. For best results, determine the optimal dose for each tumor model. Each tube contains 15 nmole of IRDye 800CW YC-27 Optical Probe.

IRDye 800CW YC-27 Properties (In 1X PBS)

- Absorption maximum: 776 nm
- Emission maximum: 792 nm

Storage and Handling

Upon receipt, immediately store at -20 °C prior to reconstitution. When stored properly, this product is stable in the lyophilized state for up to 3 months. After reconstitution, store at 4 °C for a maximum of 1 month. **Protect from light.**

Directions for Use

- Recommended administration: Inject 0.5 nmole (100 µL) intravenously via the tail vein.
- Resuspend IRDye 800CW YC-27 in 1.5 mL sterile 1X PBS. Mix well. Concentration = 0.01 nmole per µL.
- An additional dilution will be necessary to achieve recommended injection volume and dose of 0.5 nmole per 100 µL. Transfer 750 µL of the probe stock solution to a sterile 2.0 mL tube and add an additional 750 µL sterile 1X PBS to each tube for a final concentration = 0.005 nmole per µL.
- To ensure sterility, filter through a 0.2 µm nylon membrane.
- *In vivo* Imaging: Optimal signal-to-noise ratios approximately 24 hours post injection. For best results, determine the optimal imaging time point for each tumor model.

Precautions

The probe is processed through the kidneys, with excretion via the bladder.

Continued

References

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