

COMMONLY USED FLUORESCENT PROBES

IN INTRAVITAL IMAGING OF THE KIDNEY

PROBE	TARGET
Hoechst 33342	All nuclei
Propidium Iodide	Nuclei in necrotic cells
Rhodamine 123	Mitochondria, mainly proximal tubules
TMRM	Mitochondria, mainly distal tubules and collecting ducts
Rhodamine B Hexyl Ester	Mitochondria in White Blood Cells, endothelial cells, podocytes
3kDa-10kDa dextrans (any fluorophore)	Filtered from blood, Lysosomes in proximal tubules
150kDa-500kDa dextrans (any fluorophore)	Not filtered, Plasma within the vasculature
Carboxy-H ₂ DCFDA	detects reactive oxygen species. Cytoplasmic.
Dihydroethidium (DHE)	detects cytoplasmic reactive oxygen species and translocates to the nucleus
Fluorescein-Inulin	Used to measure tubular flow
NBD-glucose	Measures tubular glucose uptake
LPS-Alexa 568	Measures tubular endotoxin uptake