Essentials for Multicolor Panel Building

Fluorophore Laser Line, nm Max Ex, nm Max Em, nm Relative Brightness

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Fluorophore brightness depends on how many photons a fluorophore emits when excited by a laser. Other factors influencing the brightness are the laser power, instrument configuration, and detectors. Brighter fluorophores will generally give better separation between the negative and positive fraction in your sample.

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Not all antigens are expressed at the same level on a cell surface. Match bright fluorophores with low expressing markers and dim fluorophores with highly expressed markers.

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Careful titration of your antibodies will give you the best staining with the minimum background and thus improve the separation of your positive and negative populations (the staining index).

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Abdominal organs, lymph nodes, and other lymphoid tissue, as well as the spleen, contain a high density of lymphocytes. These lymphocytes are divided into two main populations: B lymphocytes and T lymphocytes. B lymphocytes are responsible for the immune response to specific antigens, while T lymphocytes play a crucial role in the adaptive immune response.