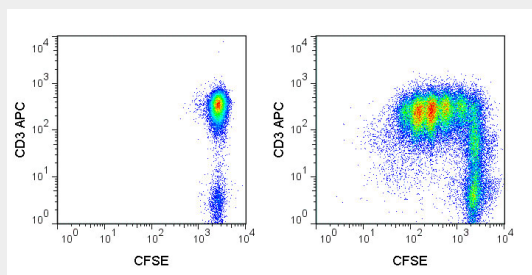


CFSE
Catalog # RTB10052**Specification****CFSE - Product Information**Application **FC****CFSE - Additional Information****CFSE - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

CFSE - Images

Human peripheral blood mononuclear cells were labeled with CFSE and left unstimulated (left panel) or stimulated for 4 days with Anti-Human CD3 and Anti-Human CD28 (right panel). Plots show intensity of CFSE vs. staining with APC Anti-Human CD3.

CFSE - Background

CFSE, also known as 5-(and -6)-Carboxyfluorescein diacetate succinimidyl ester, is a non-fluorescent molecule that easily diffuses across cell membranes. Inside the cell, acetate groups are cleaved by intracellular esterases yielding a fluorescent molecule whose succinimidyl ester group covalently interacts with primary amines of intracellular proteins. CFSE is compatible with standard intracellular staining protocols using aldehyde fixation and saponin-based permeabilization. CFSE is widely used to track cell division and to monitor cell migration in vivo. CFSE can be detected using standard fluorescein filter sets by fluorescence microscopy or flow cytometry.

CFSE - References

Lyons AB, Parish CR. 1994. J Immunol Methods. 171(1):131-137. Lyons AB. 2000. J Immunol Methods. 243(1-2):147-154. Miller MJ, Wei SH, Parker I, Cahalan MD. 2002. Science. 296(5574):1869-1873. Parish CR, Glidden MH, Quah BJ, Warren HS. 2009. Curr Protoc Immunol. Chapter 4:Unit4.9.