

DESCRIPTION

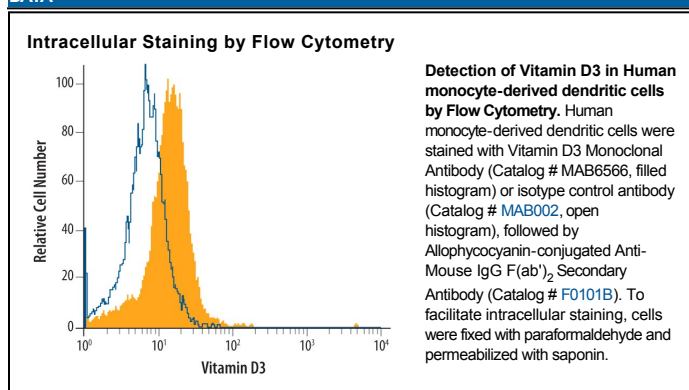
Specificity	Detects Vitamin D3 in flow cytometry.
Source	Monoclonal Mouse IgG ₁ Clone # 685503
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	25-Hydroxyvitamin D ₃
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μm filtered solution in PBS.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Intracellular Staining by Flow Cytometry	0.25 μg/10 ⁶ cells	See Below
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

DATA



PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

25-hydroxy-vitamin D₃ (25(OH)D₃) is synthesized in the liver and is the primary circulating form of vitamin D. Its blood concentration, which reflects 25(OH)D₃ produced by exposure to ultraviolet B, as well as dietary and vitamin D supplementation, is felt to be the best indicator of vitamin D status. 25(OH)D₃ is metabolized to 1α,25(OH)₂D₃ in the proximal tubular cells of the kidney by the enzyme 1α-hydroxylase. The vitamin D structure is similar to that of classic steroid hormones, such as estradiol, cortisol, and aldosterone in that they have the same root cyclopentanoperhydrophenanthrene ring structure. It has been shown that the active steroid hormone 1α,25(OH)₂D₃ is essential for life in higher animals. Besides playing important roles in calcium homeostasis and bone mineral metabolism, it is now known to play a role in cellular differentiation, inhibition of cell growth, immune regulation and the prevention of neoplastic transformation. The active form of vitamin D₃, 1α,25(OH)₂D₃, acts both through its cellular receptor, the vitamin D receptor (VDR), and through other extrarenal targets in an autocrine and paracrine manner where 1α-hydroxylase is present.