

### Effect of catechin on viability of mononuclear cells

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Catechins are natural polyphenolic compounds known for their antioxidant and anti-inflammatory properties. Their potential immunomodulatory effects have attracted increasing attention, particularly in relation to immune cell function. This study aimed to investigate the effect of catechin on the viability of peripheral blood mononuclear cells (PBMCs) *in vitro*. PBMCs cells were isolated from peripheral blood using density gradient centrifugation. Cells were treated with various concentrations of catechin hydrate for 1 and 3 hours. Cell viability was assessed using flow cytometry (BriCyte E6) with YO-PRO-1 and propidium iodide staining. Catechin treatment showed a concentration-dependent effect on PBMCs viability. Lower concentrations preserved or slightly enhanced cell viability, while higher concentrations led to a reduction in viable cells. Catechin modulates the viability of PBMCs in a dose-dependent manner. These findings suggest potential immunomodulatory effects of catechin and warrant further investigation into its mechanisms of action.

**Keywords:** lymphocyte, monocyte, viability, catechin

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