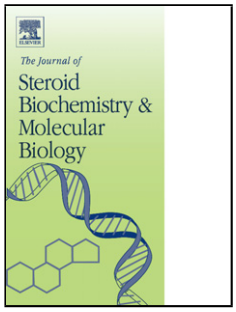

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Calcitriol-mediated reduction in IFN-γ output in T cell large granular lymphocytic leukemia requires vitamin D receptor upregulation

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Highlights

- IFN-γ levels and p-STAT1 are reduced by calcitriol within 4 h in TL-1 cell line.
- IFN-γ is transcriptionally suppressed by calcitriol and requires VDR upregulation.
- Reduction in p-STAT1 by calcitriol does not require VDR upregulation.
- Calcitriol inhibits IFN-γ and p-STAT1 through independent mechanisms.
- In the absence of calcitriol, VDR levels correlate with IFN-γ production.
- Calcitriol reduces IFN-γ to a similar amount regardless of basal VDR levels.

ABSTRACT

Constitutively activated STAT1 and elevated IFN-γ are both characteristic of T cell large granular lymphocytic leukemia (T-LGLL), a rare incurable leukemia with clonal expansion of cytotoxic T cells due to defective apoptosis. Interferon gamma (IFN-γ) is an inflammatory