



- [Immune Recovery And Wellness – www.ImmuneClinic.com](http://www.ImmuneClinic.com)
- [More Clinical Research – www.ImmuneClinic.com/research](http://www.ImmuneClinic.com/research)

## Regulation of APO-2 ligand/trail expression in NK cells- involvement in NK cell-mediated cytotoxicity.

Johnsen AC, Haux J, Steinkjer B, Nonstad U, Egeberg K, Sundan A, Ashkenazi A, Espevik T.

Department of Cancer Research and Molecular Biology, Norwegian University of Science and Technology, Trondheim, Norway. Ann-Charlotte.Johnsen@medisin.ntnu.no

Apo-2L is a new member of the tumour necrosis factor (TNF) family shown to induce apoptosis in a number of tumour cell lines. Apo-2L mRNA is expressed by numerous human tissues. Here we report that Apo-2L is expressed and utilized by human Natural Killer (NK) cells. NK cells were shown to express surface Apo-2L in response to interleukin 2 (IL-2) activation, and this response was restricted to the CD3(-) population of the NK cells. Apo-2L mRNA and intracellular Apo-2L were present in both CD3(-) and CD3(+) NK cells; however, increased expression in response to IL-2 was only observed in CD3(-)CD56(+) cells. Also, IL-2-activated NK cells were shown to utilize membrane-bound Apo-2L in mediating lysis of Jurkat cells. Furthermore, Apo-2L-induced apoptosis of Jurkat cells was more rapid than FasL-induced apoptosis, indicating an important and distinct role for Apo-2L in apoptotic cell destruction. In conclusion, we report that NK cells express Apo-2L and that IL-2 activated CD3(-) NK cells utilize the Apo-2L pathway in mediating target cell lysis. Copyright 1999 Academic Press.

PMID: 10479402 [PubMed - indexed for MEDLINE]