

# Antigen presentation and the T-cell response

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## Abstract

Cytotoxic T lymphocytes (CTL) recognize pathogen or tumor antigens as short peptides presented in the groove of MHC class I molecules. The peptides result from proteolysis in the cytoplasm and they load on class I molecules in the endoplasmic reticulum. This route of antigen presentation was therefore referred to as "the endogenous pathway." It was a surprise to discover that antigen from outside the presenting cells could stimulate the response of CTL, i.e. exogenous antigens could be presented by class I molecules to CTL. Evidence that first reported this will be presented as well as information on which professional antigen presenting cell is most likely to be involved in taking exogenous antigen from tumor cells for stimulation of CTL.