



UNIVERSITÀ
DI TRENTO

Dipartimento di
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ROOM A208- POVO 1



● ● ● FUNCTIONAL SEGREGATION OF HIF-1 α AND AHR CONTROLS NK CELL RESPONSIVENESS UNDER HYPOXIA

NK cell functions are regulated by environmental signals sensed through cellular pathways.

This study shows that hypoxia, via HIF1 α , modulates NK cell metabolism and dampens transcriptional responses to IL-12/18. However, **IFN- γ production is maintained** under hypoxia due to tryptophan sensing and AhR activation, which enhances the mTORC1-cMyc-IkB ζ pathway.

NK cells integrate signals from HIF1 α and AhR through defined transcriptional programs, allowing them to adapt their responses in complex environments like solid tumors.