HpARI Protein Secreted by a Helminth Parasite Suppresses Interleukin-33

Graphical Abstract

Highlights

- HpARI is a suppressor of IL-33 release and consequent allergic sensitization
- HpARI binds active IL-33 and nuclear DNA, tethering IL-33 within necrotic cells
- HpARI is active against both human and murine IL-33

Authors

Megan Osbourn, Dinesh C. Soares, Francesco Vacca, ..., Alasdair C. Ivens, Rick M. Maizels, Henry J. McSorley

Correspondence

rick.maizels@glasgow.ac.uk (R.M.M.), henry.mcsorley@ed.ac.uk (H.J.M.)

In Brief

Osbourn et al identified HpARI, a protein secreted by a helminth parasite that is capable of suppressing allergic responses. HpARI binds to IL-33 (a critical inducer of allergy) and nuclear DNA, preventing the release of IL-33 from necrotic epithelial cells.