

A small molecule compound IMB-LA inhibits HIV-1 infection by preventing viral Vpu from antagonizing the host restriction factor BST-2

Zeyun Mi^{1,5*}, Jiwei Ding^{1*}, Quan Zhang^{1*}, Jianyuan Zhao², Ling Ma¹, Haisheng Yu⁶, Zhenlong Liu³, Guangzhi Shan¹, Xiaoyu Li¹, Jinming Zhou¹, Tao Wei², Liguang Zhang⁶, Fei Guo⁴, Chen Liang^{3§}, Shan Cen^{1§}

¹ Institute of Medicinal Biotechnology, Chinese Academy of Medical Sciences and Peking Union Medical School, Beijing 100050, China;

² Beijing Union University, Beijing 100101, China

³ Lady Davis Institute-Jewish General Hospital, McGill University, Montreal, Quebec, Canada;

⁴ Institute of Pathogen Biology, Chinese Academy of Medical Science, Beijing, China.

⁵ Department of Biochemistry and Molecular Biology, Tianjin Medical University, Tianjin, China

⁶Institute of Biophysics, Chinese Academy of Sciences, Beijing, China

*These authors contributed equally to this work

[§] Corresponding author: Shan Cen, Tel: 86-10-63037279; Fax: 86-10-63037279; E-mail:

shancen@imb.pumc.edu.cn; or Chen Liang, Tel: 1-514-3408260; Fax: 1-514-3407537; E-mail:

chen.liang@mcgill.ca

Running title: A compound inhibits Vif-mediated degradation of BST-2.

Key words: HIV-1, BST-2, Vpu, Tetherine, small molecule compound

Fig 1D

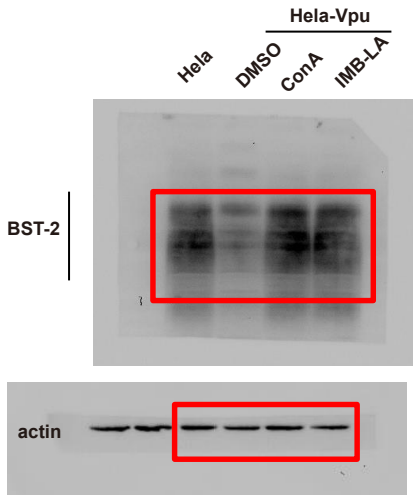


Fig 2B

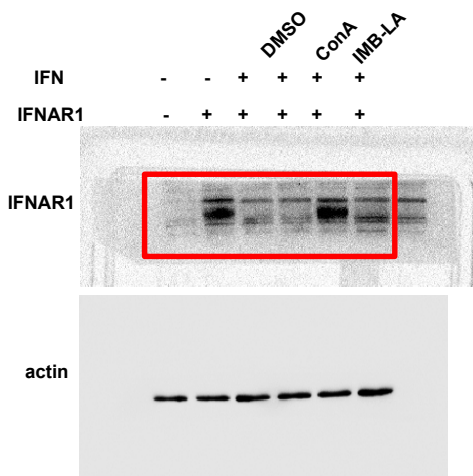


Fig 3B

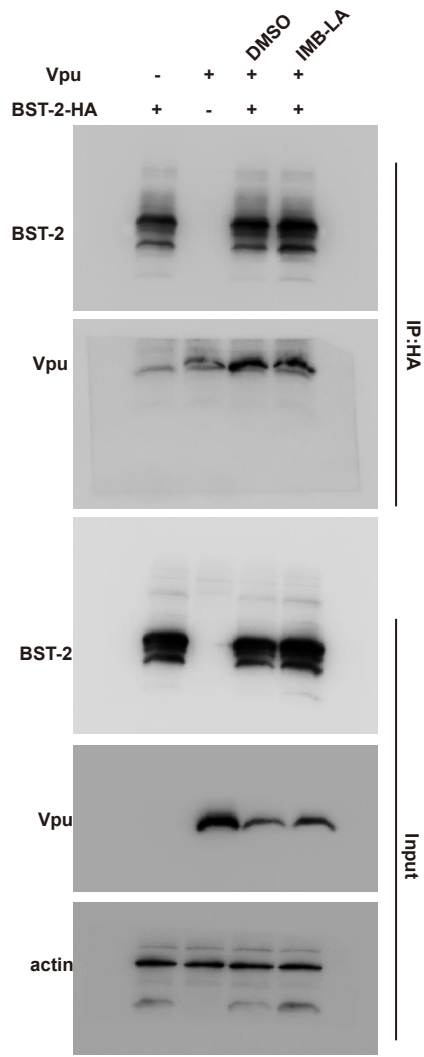


Fig 3D

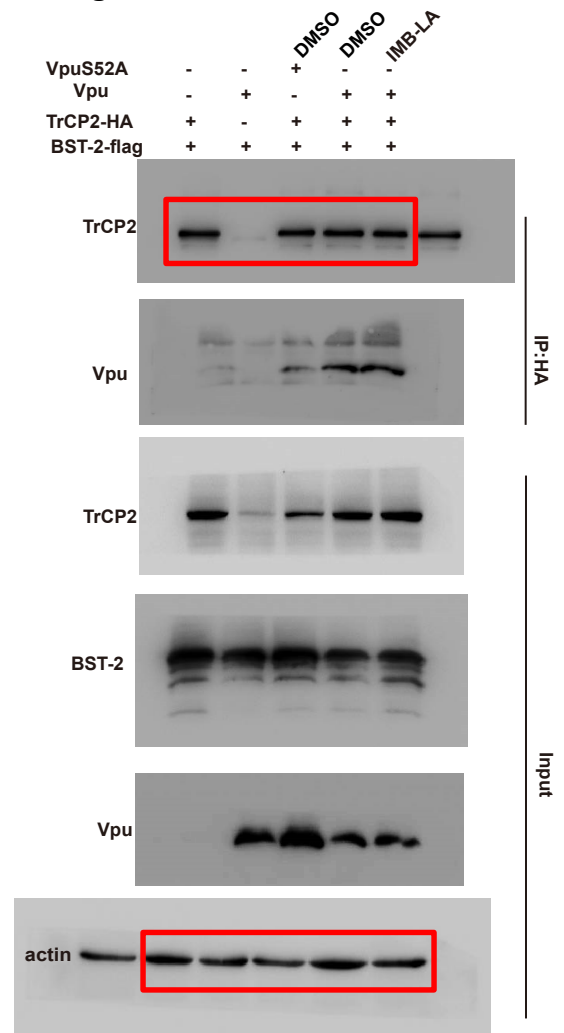


Fig 4

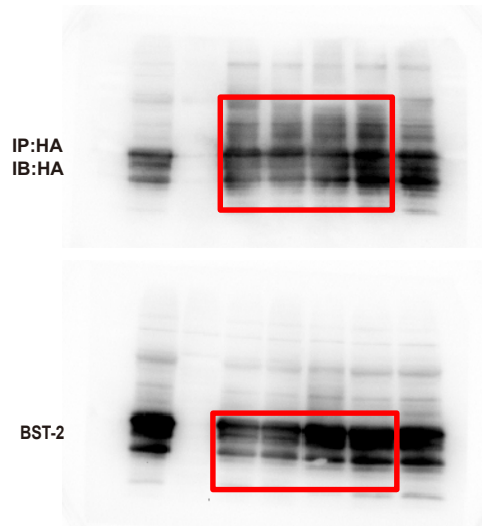
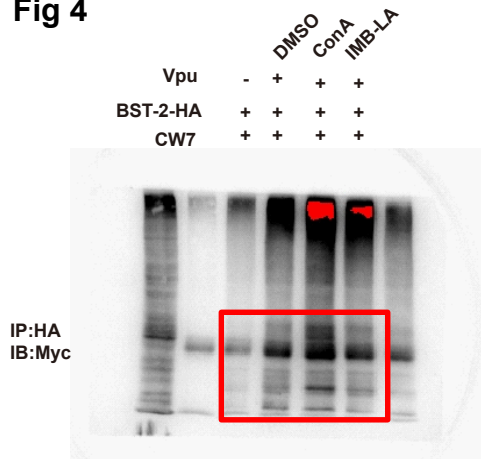


Fig 6A

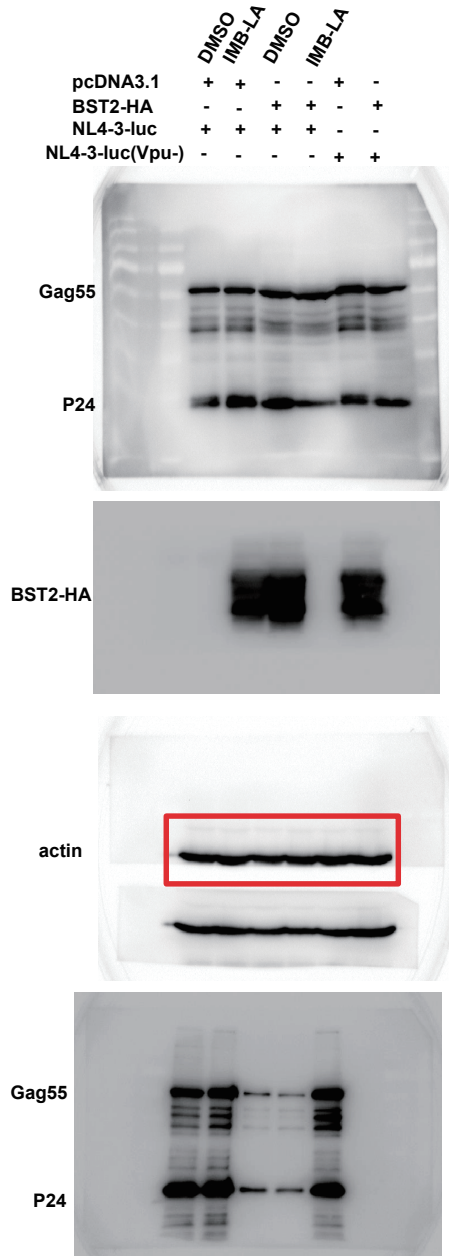


Fig 6B

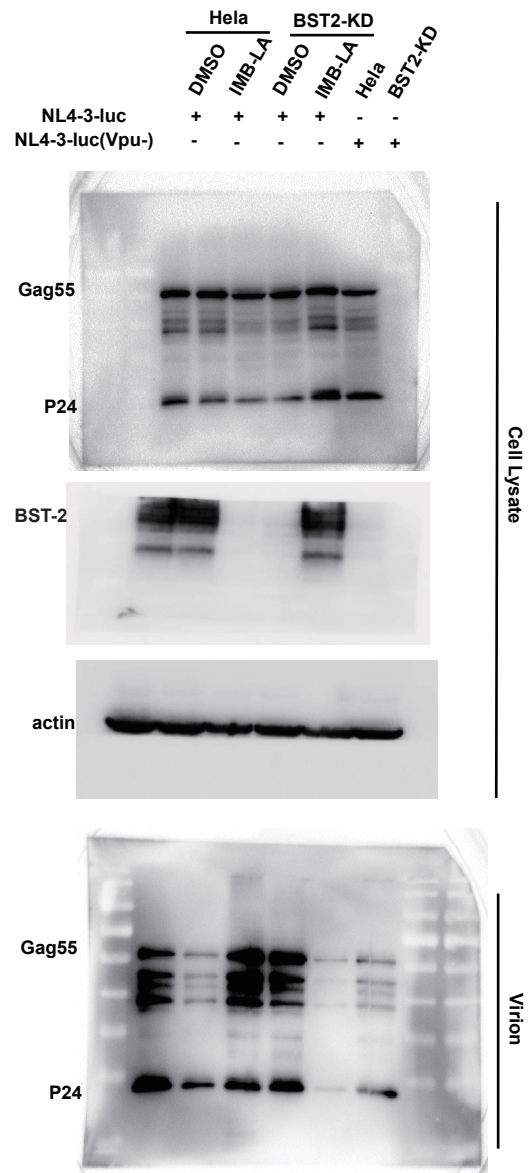


FIG 6G

