

## **LOXL2-mediated H3K4 oxidation reduces chromatin accessibility in triple-negative breast cancer cells**

J.P. Cebrià-Costa<sup>1</sup>, L. Pascual-Reguant<sup>1</sup>, A. Gonzalez-Perez<sup>2</sup>, G. Serra-Bardenys<sup>1</sup>, J. Querol<sup>1</sup>, M. Cosín<sup>1</sup>, G. Verde<sup>3</sup>, R.A. Cigliano<sup>4</sup>, W. Sanseverino<sup>4</sup>, S. Segura-Bayona<sup>2</sup>, A. Iturbide<sup>5</sup>, D. Andreu<sup>6</sup>, P. Nuciforo<sup>1</sup>, C. Bernado-Morales<sup>1,7</sup>, V. Rodilla<sup>1</sup>, J. Arribas<sup>1,7,8,9</sup>, J. Yelamos<sup>10</sup>, A. Garcia de Herreros<sup>6,10</sup>, T.H. Stracker,<sup>2</sup> S. Peiró<sup>1\*</sup>

<sup>1</sup>Vall d'Hebron Institute of Oncology (VHIO), 08035 Barcelona, Spain. <sup>2</sup>Institute for Research in Biomedicine (IRB Barcelona), Barcelona Institute of Science and Technology, 08028 Barcelona, Spain. <sup>3</sup>Faculty of Medicine and Health Sciences, Universitat Internacional de Catalunya, Barcelona, Spain. <sup>4</sup>Sequentia Biotech SL, Comte d'Urgell, 240, Barcelona, Spain. <sup>5</sup>Institute of Epigenetics and Stem Cells, Helmholtz Zentrum München, D-81377 München, Germany. <sup>6</sup>Departament de Ciències Experimentals i de la Salut, Universitat Pompeu Fabra, Barcelona, Spain. <sup>7</sup>Centro de Investigación Biomédica en Red en Oncología (CIBERONC), 08035 Barcelona, Spain. <sup>8</sup>Institució Catalana de Recerca I Estudis Avançats (ICREA), Barcelona, Spain. <sup>9</sup>Departament de Bioquímica y Biología Molecular, Universitat Autònoma de Barcelona, Bellaterra, Spain. <sup>10</sup>Programa de Recerca en Càncer, Institut Hospital del Mar d'Investigacions Mèdiques (IMIM), Barcelona, Spain.

\*Corresponding author. Email: speiro@vhio.net; Vall d'Hebron Institute of Oncology, c/ Natzaret 115-117, 08035 Barcelona, Spain; phone: 34-932 543 450 (8683)

## **Figure legends**

**Supplementary Figure 1.** Western blot with the indicated antibodies in 293 cells infected with GFP (MOCKGFP+), LOXL2-IRES-GFP (LOXL2GFP+), or LOXL2mut-IRES-GFP (LOXL2mutGFP+).

**Supplementary Figure 2.** Percentage of the indicated chromosome alterations per total number of cells in Control and LOXL2 KD conditions in two independent experiments, with a representative image of each condition. \* $P < 0.05$ .

**Supplementary Figure 3.** (A) Caspase-3 activation analyzed by Western blot with the indicated antibodies. Tubulin was used as a loading control. Intervening lanes were removed as indicated. (B) Heat map and gene ontology (GO) analysis of differentially expressed genes by RNA-seq in control and *LOXL2* knockdown samples.

**Supplementary Table 1.** List of the antibodies and working dilutions used in the manuscript.

**Supplementary Table 2.** List of the primers used in the manuscript.