

## **Description of Additional Supplementary Files**

### **File Name: Supplementary Data 1**

Description: LC/MS spectrum count. Related to Figs. 4a and 4b and Supplementary Figs 4a-d.

### **File Name: Supplementary Data 2**

Description: Limma analysis output for the rCD99WT interactome, normalized against control immunoprecipitation samples. Related to Fig. 4a and Supplementary Figs. 4a and 4b.

### **File Name: Supplementary Data 3**

Description: Complete interactome network (interaction score-based). Related to Supplementary Fig 4a.

### **File Name: Supplementary Data 4**

Description: Selected protein subset from the interacting protein network. Related to Supplementary Fig. 4a

### **File Name: Supplementary Data 5**

Description: Limma analysis output comparing the Cyt-Mut interactome with the rWT interactome. Related to Fig 4b and Supplementary Figs. 4c and 4d.

### **File Name: Supplementary Data 6**

Description: Limma analysis output comparing the TM-Mut interactome with the rWT interactome. Related to Fig 4b and Supplementary Figs. 4c and 4d.

### **File Name: Supplementary Data 7**

Description: Summary of fold-change values in the mutant interactomes. Related to Fig. 4b and Supplementary Figs. 4c and 4d.

### **File Name: Supplementary Movie 1**

Description: Live-cell imaging of actin dynamics in WT versus *Cd99*<sup>-/-</sup> CTLs during immunological synapse formation. Related to Fig. 1c.

### **File Name: Supplementary Movie 2**

Description: Live-cell imaging of microtubule dynamics in WT versus *Cd99*<sup>-/-</sup> CTLs during immunological synapse formation. Related to Fig. 2b.

### **File Name: Supplementary Movie 3**

Description: Co-localization of actin and microtubules in WT versus *Cd99*<sup>-/-</sup> CTLs during immunological synapse formation. Related to Fig. 2c.

### **File Name: Supplementary Movie 4**

Description: Three-dimensional structured illumination microscopy (3D-SIM) of WT versus *Cd99*<sup>-/-</sup> CTLs. Related to Supplementary Fig. 2d.

### **File Name: Supplementary Movie 5**

Description: Dynamics of actin and microtubules in rWT- versus Mock-transduced CTLs during immunological synapse formation. Related to Supplementary Fig. 3d.

### **File Name: Supplementary Movie 6**

Description: Live-cell imaging of rCD99 localization (upper panel) and actin & microtubule dynamics (lower panel) in rWT, Cyt-Mut, and TM-Mut CTLs during immunological synapse formation. Related to Fig. 3c.

### **File Name: Supplementary Movie 7**

Description: Co-localization of rCD99s with actin or microtubules in rWT, Cyt-Mut, and TM-Mut CTLs during immunological synapse formation. Related to Fig. 3c.