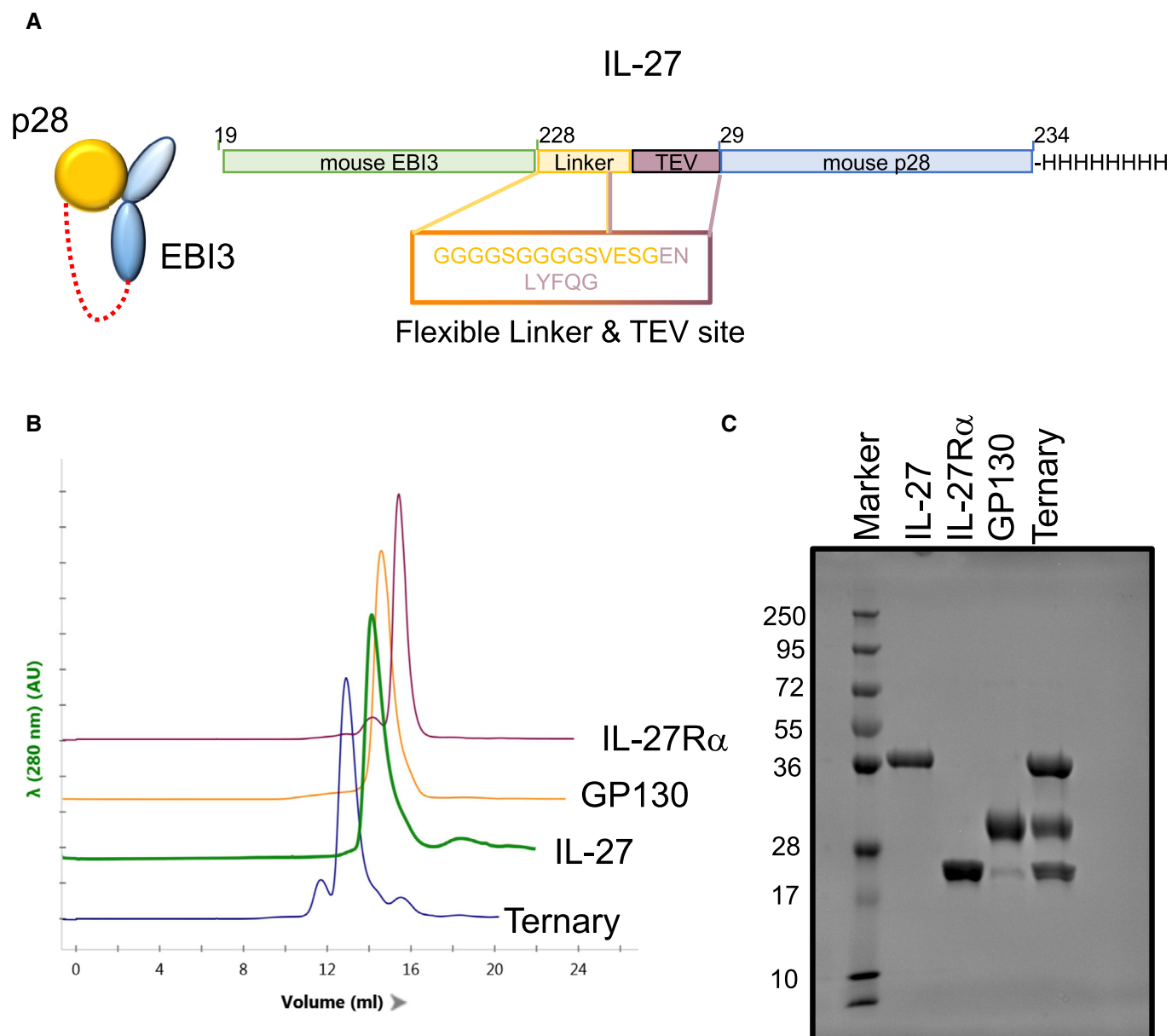# Expanded View Figures

A

B

C

Figure EV1. Assembly and characterization of the IL-27-receptor complex.

A Schematic representation of the single chain IL-27 heterodimer.
B Chromatogram overlay from size exclusion chromatography of the different IL-27 complex components.
C Coomassie-stained SDS-PAGE analysis under reducing conditions of the individual components plus the IL-27:IL-27Rα:GP130 complex used for cryoEM studies.
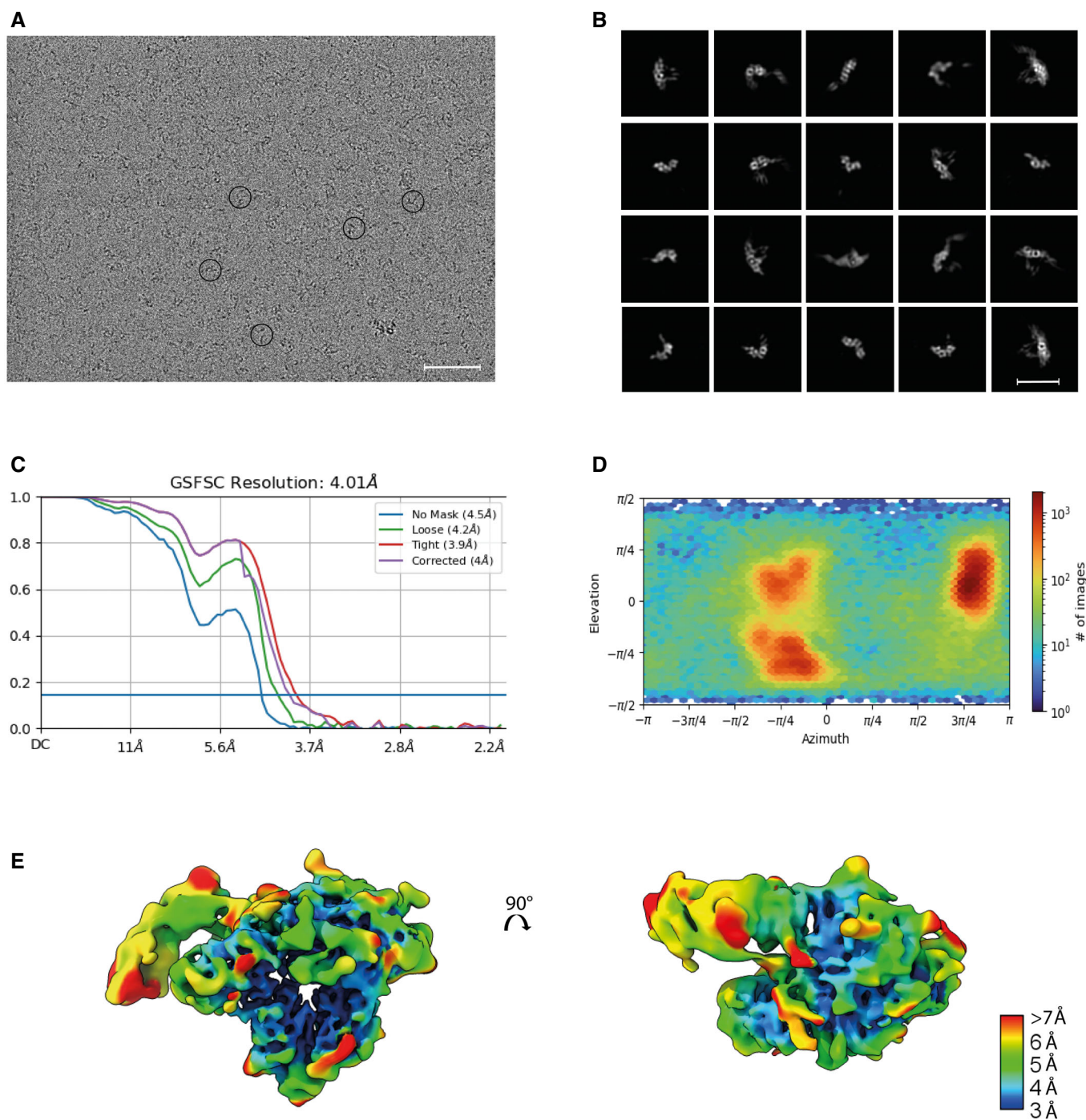
Figure EV2. Supplementary cryoEM data.

A Raw cryoEM micrograph with examples of the IL-27 receptor complex circled. Scale bar 50 nm.

B A subset of representative 2D class averages. Scale bar 110 Å.

C Gold standard Fourier shell correlation (GSFSC) for the final reconstruction. The resolution at the 0.143 cutoff is reported.

D Angular distribution plot.

E IL-27 receptor recognition reconstruction filtered according to local resolution ranging from 3 Å (blue) to 7–15 Å (red).
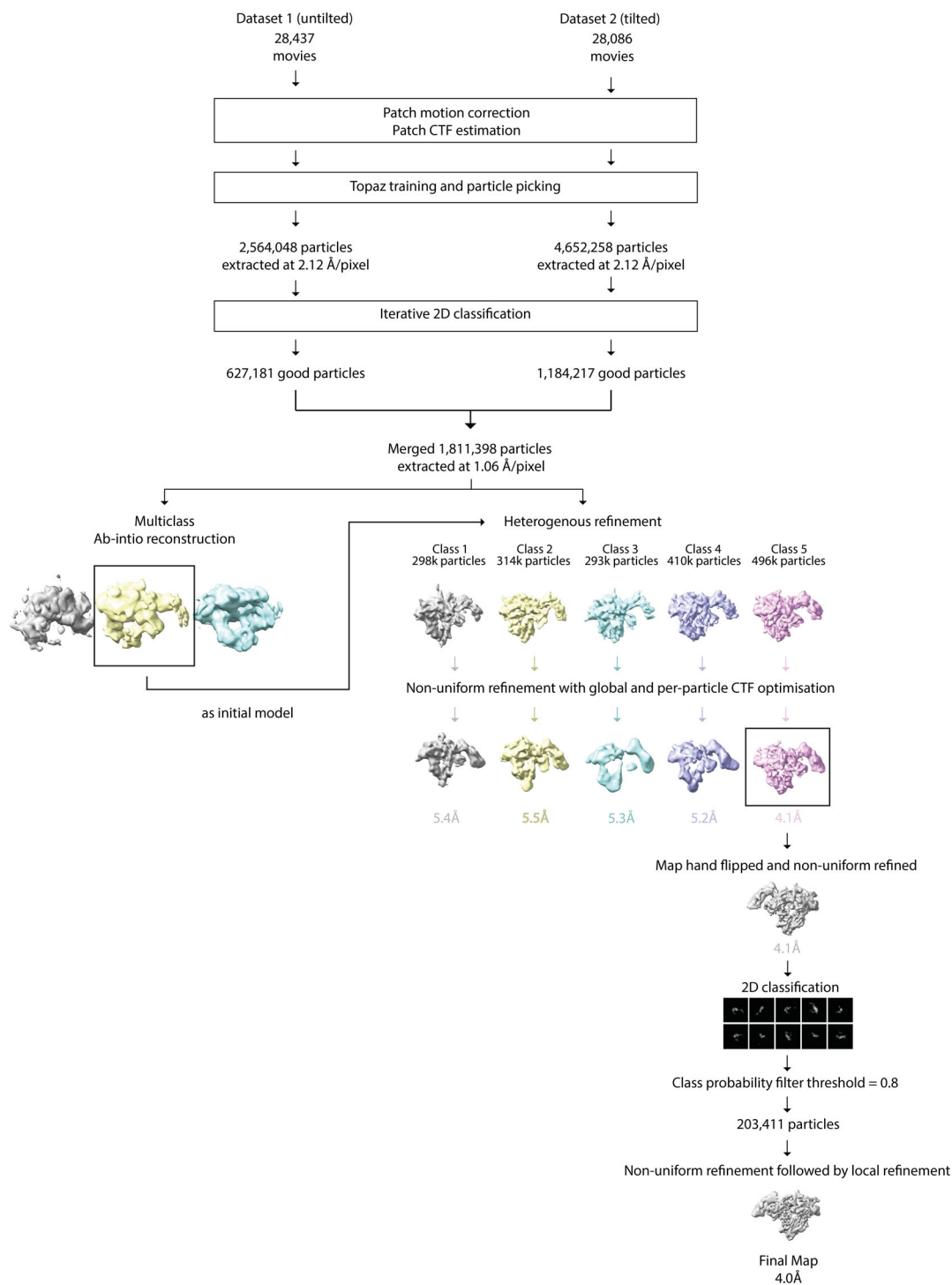
Figure EV3. CryoEM image processing workflow outlining steps performed to obtain the structure of IL-27 heterodimer complex.

All processing was performed using CryoSPARC v.3.3.1 (see Materials and Methods for details).
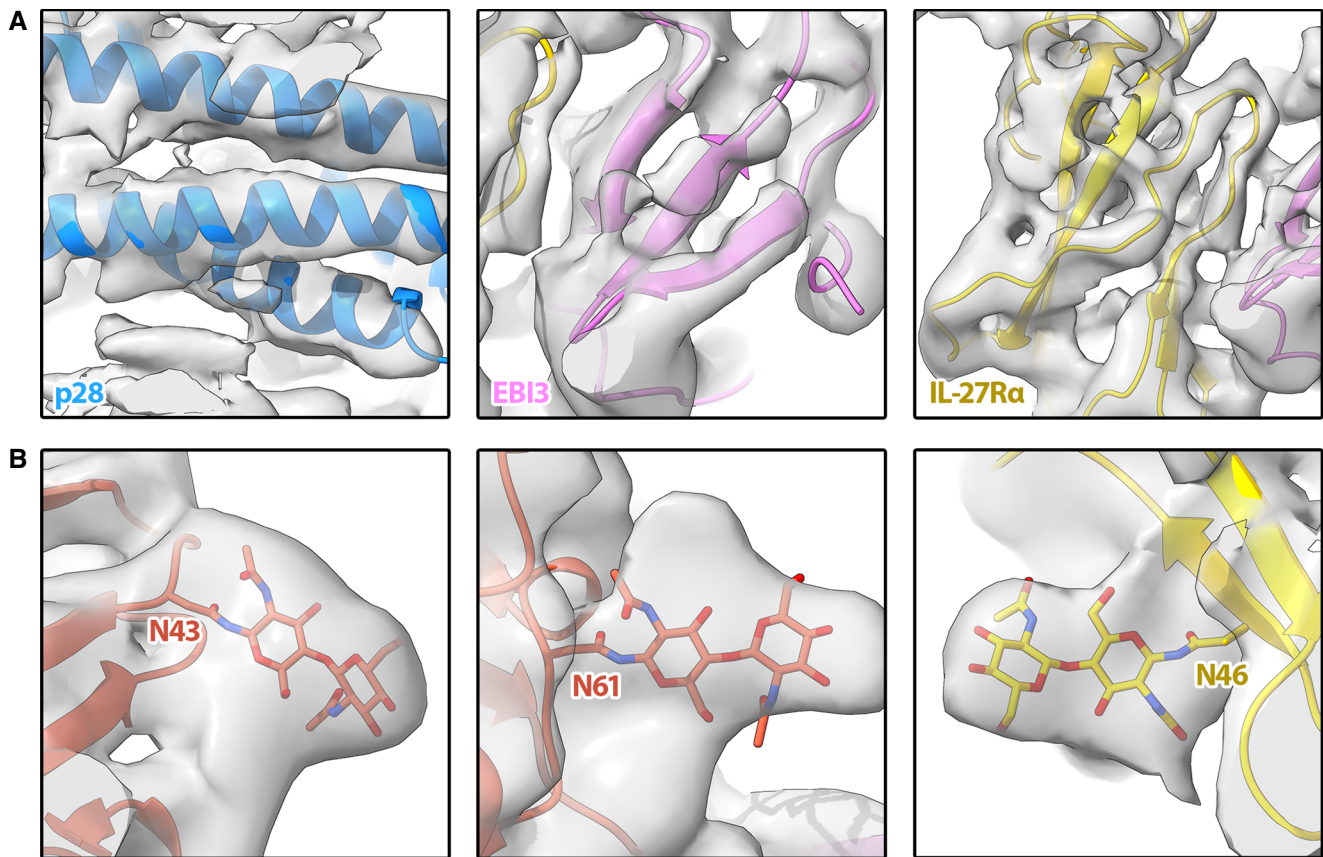
Figure EV4. Model for the IL-27 receptor signaling complex overlaid with the cryoEM map.

A Map/model overlays for density corresponding to p28 (left panel), EBI3 (middle panel), and IL-27Rα (right panel).
B Representative glycan density in the map corresponding to known glycosylation sites on GP130 (left and middle panels) and IL-27Rα (right panel).
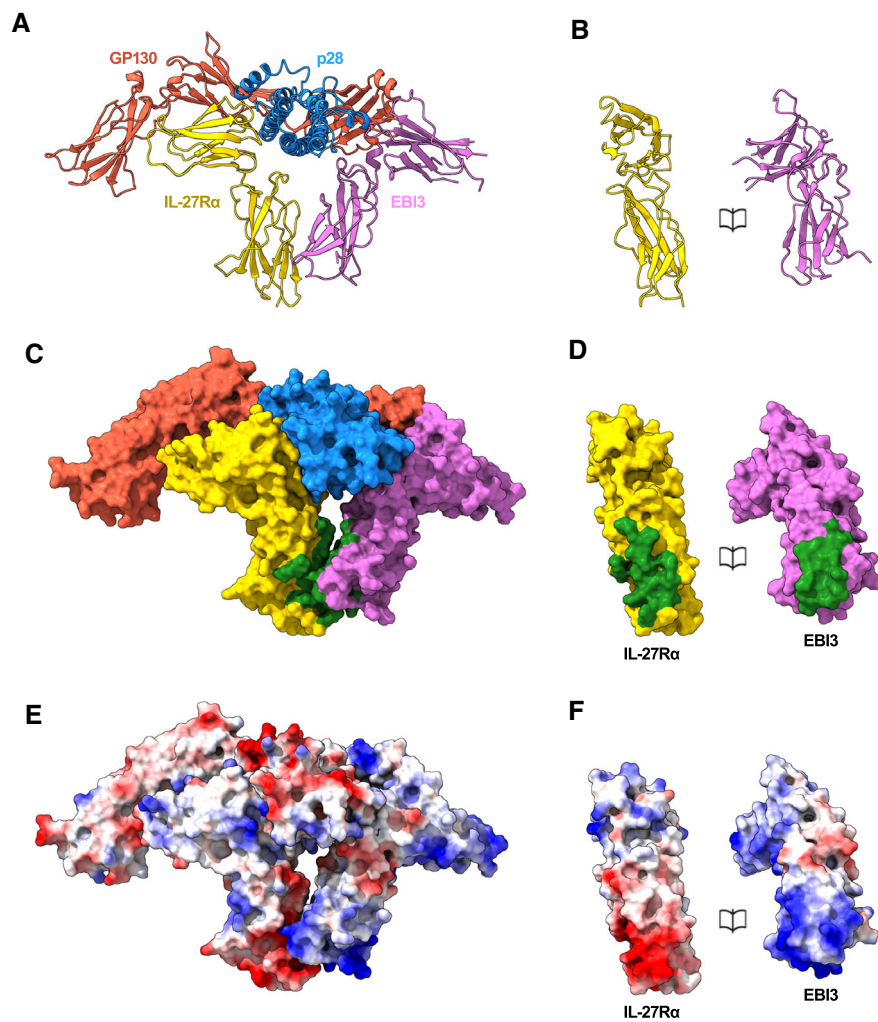
Figure EV5. EBI3:IL-27Rα interface.

A–F   Ribbon representation of the IL-27 receptor recognition complex (A) and book representation of the EBI3:IL-27α interface (B). Individual proteins colored: EBI3 (purple), IL-27Rα (yellow), p28 (blue), GP130 (red). Surface representation of the complex (C) and book representation of the interface (D). Proteins colored as in (A) with EBI3: IL-27Rα interface residues in green. Coulombic electrostatic potential ranging from −10 (red) to 10 (blue) kcal/(mole) calculated from the models in A (E) and corresponding book representation of the interface (F).