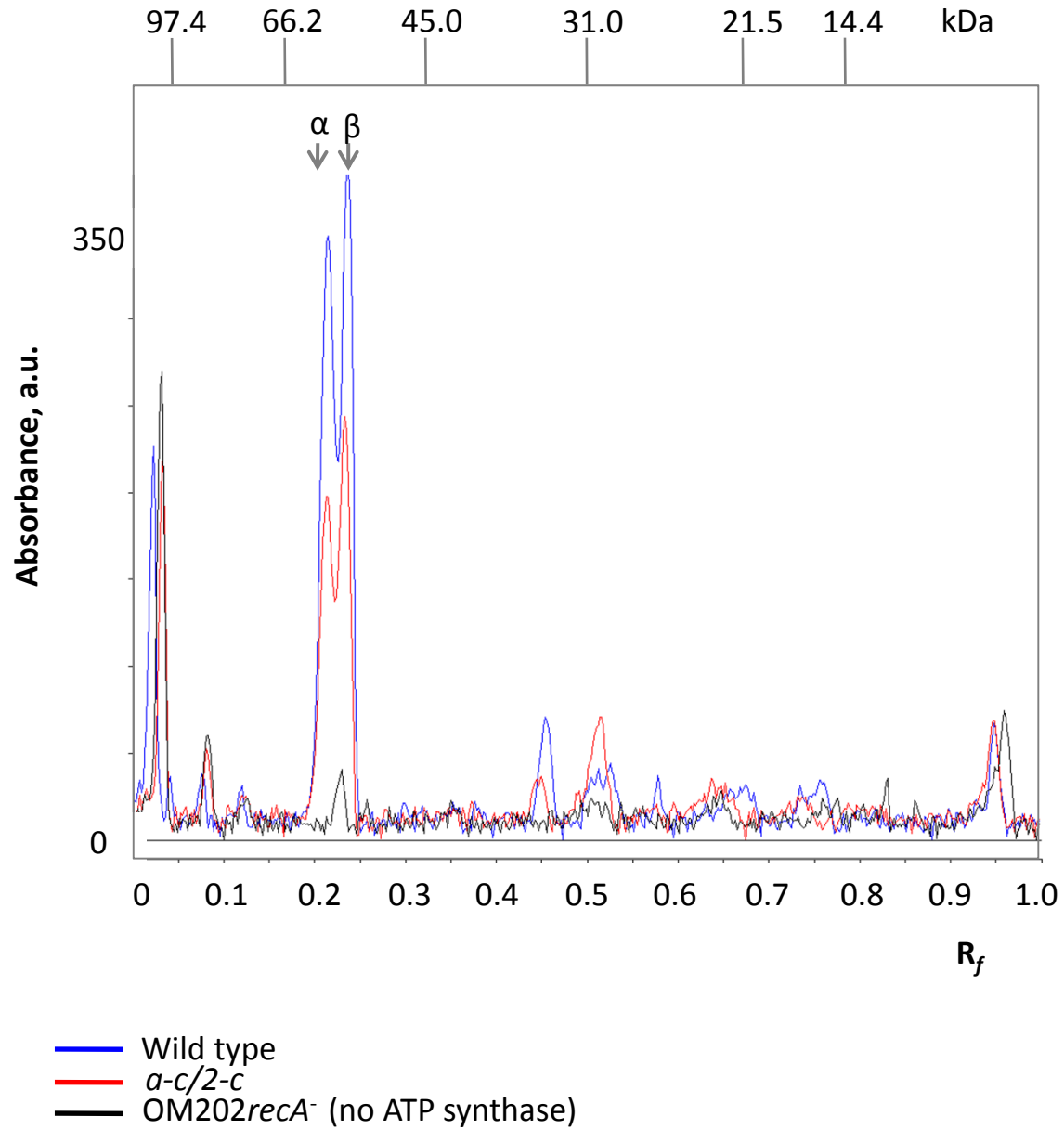


**Assembly mutants of subunit *c* do not support ATP-driven proton translocation.** The H<sup>+</sup>-transport was measured by ACMA fluorescence quenching in the membrane vesicles (50 μg/ml total membrane protein) with the wild type ATP synthase from strain OM202*recA*:pBWU13 (A), and subunit *c* mutants L31F (B) and G23D (C) that do not assemble into oligomeric rings in the same background strain. Additions of 2.0 mM ATP and 2.0 μM proton uncoupler FCCP are indicated by the arrows.



**The F<sub>1</sub>-content of the membranes with *a-c/2-c* fusion protein is about 60% of the wild type.** The membranes from strains OM202*recA*<sup>-</sup> (no ATP synthase, *black*), pBWU13/OM202*recA*<sup>-</sup> (wild type, *blue*), pHP808/OM202*recA*<sup>-</sup> (*a-c/2-c*, *black*) were extracted with EDTA (see Table 1) and the extract was separated by SDS-PAGE. The gels were stained with Coomassie R-250 and the content of subunits α and β measured by densitometry. Positions of molecular weight markers are shown above.