ABSTRACT: A detailed carbon-isotope stratigraphy has been generated from Barremian to Lower Aptian shallow-water carbonate sections in the Campania Apennines (Monte Raggeto, southern Italy). The new isotope curve is correlated with the magnetostratigraphically and biostratigraphically dated pelagic carbon-isotope stratigraphy from the Cismon locality (Southern Alps, northern Italy). All the major positive and negative carbon-isotope excursions that characterize the Barremian and Early Aptian carbon-isotope stratigraphy can be recognized in the shallow-water curve. Cyclostratigraphy, which was established earlier at the Monte Raggeto section, is used as an age calibration tool for the Barremian and Early Aptian isotope stratigraphy. The duration of the isotopically calibrated stratigraphic interval between the top of Chron M3 and the base of Chron M0 is estimated as 4 My. These time calculations are in good agreement with cyclostratigraphic data from the Cismon locality but differ from estimates based on a magnetic anomaly block model for the interval between M3 and M0 that yield only 3 My. We have also calculated that the Selli Level Equivalent (SLE) at the Monte Raggetto locality was deposited within 1.2 My. Our results demonstrate that the combination of chemostratigraphic and cyclostratigraphic studies can contribute significantly to the calibration of the Mesozoic time scale.