Supporting information

Synthesis and biological evaluation of novel semi-conservative mono-carbonyl analogs of curcumin as anti-inflammatory agents

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UV-visible absorption spectra of curcumin and its analogs

Absorbance readings were taken from 250 to 600 nm using a spectrum Max M5 (Molecular Devices, USA). A stock solution of 1 mM curcumin or analogs was prepared and diluted by phosphate buffer (pH 7.4) to a final concentration of 20 mM. In the experiments where degradation of curcumin was recorded, the absorption spectra were collected for over 25 min at 5 min intervals. The UV-visible absorbance spectrum was measured at 25 °C at varying time interval in a 1 cm path-length quartz cuvette.

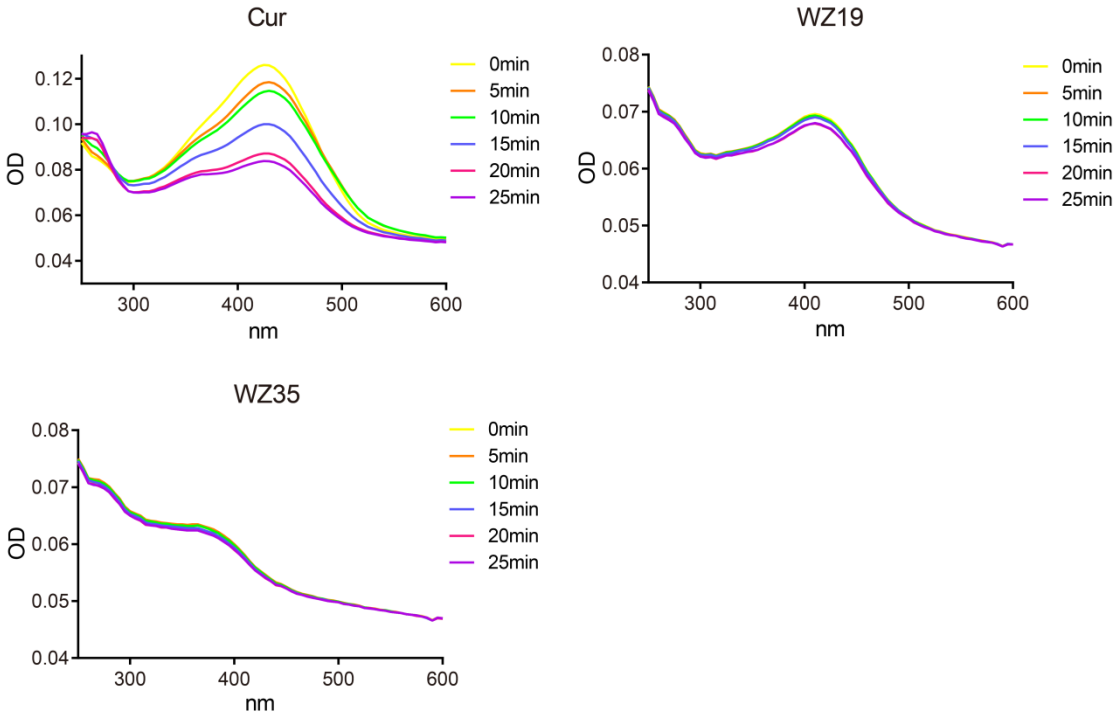

Fig. S1 UV-visible absorption spectrum of curcumin, **WZ19** and **WZ35** in phosphate buffer (pH 7.4) containing 5% dimethyl sulfoxide.

As shown in **Fig. S1**, the UV-visible absorption spectrum of curcumin displayed an intense peak with an absorption maximum close to 425 nm, and the absorption intensity of the curcumin spectrum decreases significantly in phosphate buffer (pH 7.4) with time. Within 25 min of its incubation in phosphate buffer, curcumin lost more than 45% of its original intensity, while **WZ19** and **WZ35** degraded much less than curcumin. These two analogs showed almost complete stability in phosphate buffer within the 25-min incubation. This result indicates that these semiconservative mono-carbonyl analogs of curcumin are much more stable than curcumin in vitro.