

**A murine monoclonal antibody based enzyme-linked immunosorbent assay for almond (*Prunus dulcis* L.) detection.**

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**Abstract:**

A sandwich enzyme-linked immunosorbent assay (ELISA) using anti-almond soluble protein rabbit polyclonal antibodies as capture antibodies and murine monoclonal antibody 4C10 as the detection antibodies was developed. The assay is specific and sensitive (3–200 ng almond protein/mL) for almond detection. The standardized assay is accurate (<15% CV) and reproducible (intra- and inter assay variability <15% CV). The assay did not register any cross-reactivity with the tested food matrices, suggesting the assay to be almond amandin specific. The assay could detect the presence of declared almond in the tested matched commercial samples. Further, the assay reliably detected the presence of almonds in the laboratory prepared food samples spiked with almond flour.