



FIG. 7.10 Western blot (A) and relative expression of β -catenin (B) in chorioallantoic membranes (* $P < .05$ with respect to absolute control (AC), negative control (EM), EM+45S5, and EM+0.20mmol NaCl).

7.3 OSTEOGENIC EFFECTS OF LITHIUM-CONTAINING BIOACTIVE GLASSES

To the best of our knowledge, the first demonstration that Li-containing BGs were biocompatible for cultured osteoblastic cells was reported by [Khorami et al. \(2011\)](#) who partially substituted Na_2O by variable amounts of Li_2O (3, 7, and 12 wt%) in the 45S5 BG. The cellular studies using rat calvaria-derived osteoblastic cells showed a better proliferation rate and alkaline phosphatase activity of osteoblasts on glasses with high Li content ([Khorami et al., 2011](#)).

It has also been demonstrated that the ionic release from Li-substituted BG in the $\text{SiO}_2\text{-CaO-Na}_2\text{O-P}_2\text{O}_5$ (45S5) system can be tailored to maximize a