

## Ion dependent cellular uptake of taurine in mouse osteoblast cell lines

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Taurine is present in a variety of tissue and exhibits many important physiological functions in many tissues. Although it is known that many tissues mediate taurine transport, its functions of taurine transport in bone have not been identified yet. In the present study, we investigated the expression of taurine transporter (TauT) and taurine uptake using mouse stromal ST2 cells and osteoblast-like MC3T3-E1 cells, which is bone related cells. Detection of TauT mRNA expression in these cells were performed by reverse transcription polymerase chain reaction (RT-PCR). The activity of TauT was assessed by measuring the uptake of [<sup>3</sup>H]taurine in the presence or absence of inhibitors. TauT mRNA was detected in these cells. [<sup>3</sup>H]Taurine uptake was dependent upon the presence of extracellular sodium, chloride and calcium ions, and inhibited by cold-taurine and  $\beta$ -alanine. These results suggest that taurine has biological functions in bone and some effect on the bone cells.