ABSTRACT

A method for producing equol and 5-hydroxyequol using a microorganism having the ability to produce equol from daidzeins, and the ability to produce 5-hydroxyequol from genisteins, wherein the daidzeins and the genisteins are present at the start of culture of the microorganism, molar conversion efficiency from the genisteins to 5-hydroxyequol is 0.150%/h or more, a molar concentration ratio of the genisteins to the daidzeins at the start of the culture is 1.300 or more or 0.700 or less, the daidzeins are daidzin, malonyldaidzin, acetyldaidzin, daidzein, dihydrodaidzein, or a combination thereof, and the genisteins are genistin, malonylgenistin, acetylgenistin, genistein, dihydrogenistein, or a combination thereof.