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Human alpha beta hydrolase domain containing protein 11 and its yeast homolog are lipid hydrolases

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1 **Human alpha beta hydrolase domain containing protein 11 and its yeast homolog are**  
2 **lipid hydrolases**

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14 **ABSTRACT**

15 Mammalian alpha/beta hydrolase domain (ABHD) family of proteins have emerged as key  
16 regulators of lipid metabolism and are found to be associated with human diseases. Human  
17  $\alpha/\beta$ -hydrolase domain containing protein 11 (ABHD11) has recently been predicted as a  
18 potential biomarker for human lung adenocarcinoma. *In silico* analyses of the ABHD11  
19 protein sequence revealed the presence of a conserved lipase motif GX SXG. However, the  
20 role of ABHD11 in lipid metabolism is not known. To understand the biological function of  
21 ABHD11, we heterologously expressed the human *ABHD11* in budding yeast,  
22 *Saccharomyces cerevisiae*. *In vivo* [<sup>14</sup>C]acetate labeling of cellular lipids in yeast cells  
23 overexpressing *ABHD11* showed a decrease in triacylglycerol content. Overexpression of

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