Additive models, as a natural generalization of linear regression, have played an important role in studying nonlinear relationships. Despite of much recent progress on additive models, the statistical inference problem in additive models has been much less understood. Motivated by inference for the exposure effect, we tackle the statistical inference problem for $f_1'(x_0)$ in additive models, where $f_1$ denotes the univariate function of interest and $f_1'(x_0)$ denotes its first order derivative evaluated at a specific point $x_0$. The main challenge for this local inference problem is due to the additional uncertainty of estimating other nuisance functions. To address this, we propose a decorrelated local linear estimator, which is particularly useful in reducing the effect of the estimation error related to the nuisance functions on the estimation accuracy of $f_1'(x_0)$. We establish the asymptotic limiting distribution for the proposed estimator and then construct confidence interval and conduct hypothesis testing for the estimand $f_1'(x_0)$. The variance level of the asymptotic limiting distribution is of the same order as that for the nonparametric regression while the bias of the proposed estimator is jointly determined by how well we can estimate the nuisance functions and the relationship between the variable of interest and the nuisance variables. The method is developed for general additive models and is demonstrated in high-dimensional sparse additive model.