$$c_i := \sup_{x_1,\ldots,x_N,x_i'} |Y_1(x_1,\ldots,x_i,\ldots,x_N) - Y_1(x_1,\ldots,x_i',\ldots x_N)|$$
$$\leq \sup_{x_1,\ldots,x_N,x_i'} |(x_i^\perp)^- \cap (1 + c_{n,N})B_n|,$$