

# Search for single top + Higgs production with CMS

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We present recent results from searches for the production of a Higgs boson in association with a single top quark (tHq), using data samples collected by the CMS detector in pp collisions at center-of-mass energy of 13 TeV. The searches exploit different top quark and Higgs boson decay modes resulting in final states with photons, bottom quarks, and multiple leptons, and employ multivariate techniques to maximize the sensitivity to the signal. Due to a strong interference between the two main leading-order diagrams, the tHq process is sensitive to the relative sign of the couplings of the Higgs to the top quark and the vector bosons, and thus provides unique information on Higgs boson properties.

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