inverse isotope effect

A kinetic isotope effect in which $\frac{k^{\mathrm{l}}}{k^{\mathrm{h}}} < 1$, i.e. the heavier substrate reacts more rapidly than the lighter one, as opposed to the more usual 'normal' isotope effect, in which $\frac{k^{\mathrm{l}}}{k^{\mathrm{h}}} > 1$. The isotope effect will normally be 'normal' when the frequency differences between the isotopic transition states are smaller than in the reactants. Conversely, an inverse isotope effect can be taken as evidence for an increase in the corresponding force constants on passing from the reactant to the transition state.

Source:
PAC, 1994, *66*, 1077 *(Glossary of terms used in physical organic chemistry (IUPAC Recommendations 1994))* on page 1130