In addition to fusion proteins, ubiquitin derivatives conjugated with a fluorophore have been reported as substrates for biochemical DUB assays. Ubiquitin-Rhodamine 110 (Ub-Rho110-G) is a fluorogenic rhodamine-based substrate. While the disubstituted rhodamine moiety in Ub-Rho110-G is essentially non-fluorescent, cleavage results in a mono-substituted rhodamine, Rho110-G, which exhibits intense fluorescence when excited at 485 nm (Hassiepen et al., 2007). The rhodamine fluorophore exhibits optical properties more appropriate – than Ubiquitin-AMC – for compound screening and profiling. The risk of artifacts in screens due to autofluorescence of compounds is substantially reduced as the rhodamine 110 fluorophore has excitation and emission wavelengths of 485nm and 535nm respectively (Hassiepen et al., 2007).

References: