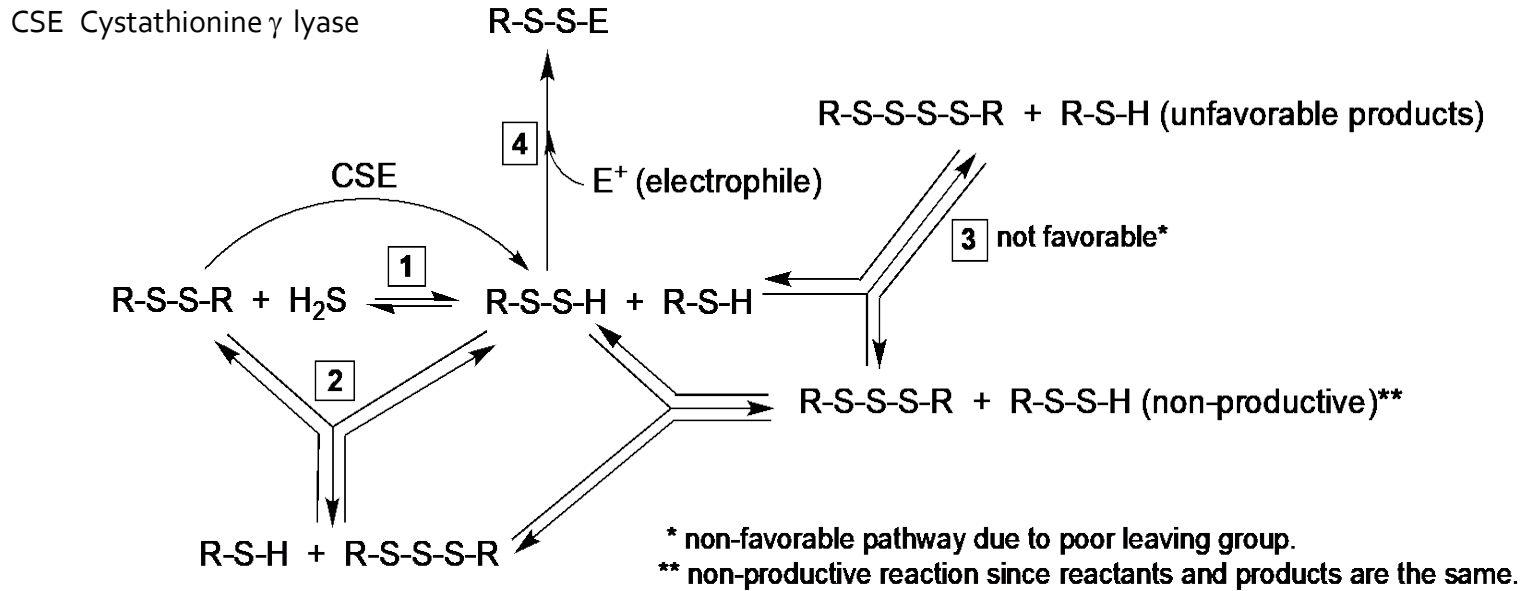


The Reaction of γ Irogen Sulfide with Disulfides Formation of a Stable Trisulfide and Implications to Biological Systems



Equilibrium 1 is a previously established reaction, which has been used by several labs to generate RSS species *in situ*.
Equilibrium 2 is evidenced by results presented in this study. Both NMR and mass spectral analysis indicate that the reaction of a disulfide e.g. 2 E with H_2S results in detectable levels of thiol 2 E and the corresponding trisulfide 2 ET.
Reaction 3 tetrasulfide, RSSSSR formation appears unfavorable and, respectively, RSSSSR species are not observed.
Reaction 4 the trapping of RSS by an endogenous electrophile, occurs readily and serves as evidence for the proposed equilibria.
 $2 E, C_2C_2S_2 + 2 E, C_2C_2SSC_2C_2 \rightleftharpoons 2 ET, C_2C_2SSSC_2C_2$