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Mercury ion-mediated “molecular beacon” integrating with hybridization chain reaction: application to fluorescence turn-on detection of glutathione by using quantum dots and Ru complex

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Highlights

- A new fluorescence strategy for GSH detection is developed.
- The strategy relies on Hg^{2+} -mediated MBs to trigger HCR and fluorescence change of QDs.
- The approach demonstrates high sensitivity and selectivity in GSH detection.
- This approach is successfully applied to evaluate cellular GSH levels.

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