Supplementary Information

A Novel FeMoOv Nanozyme-Based Dual-Mode Sensing System for Highly Selective and Sensitive Glutathione Monitoring

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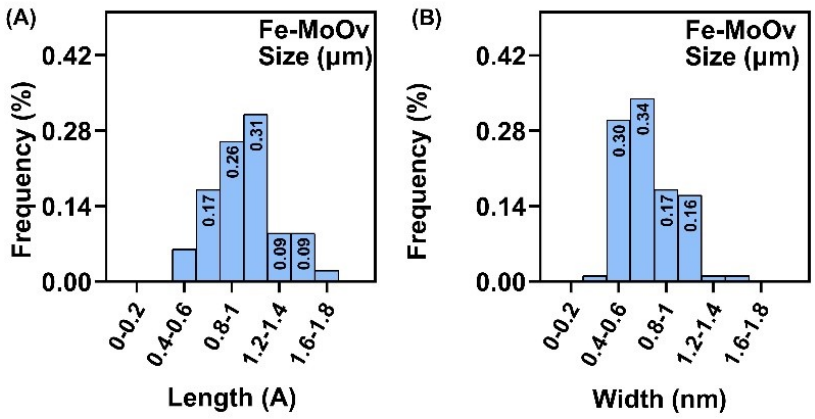

Fig. S1 The size distributions in length (A) and width (B) of Fe-MoOv

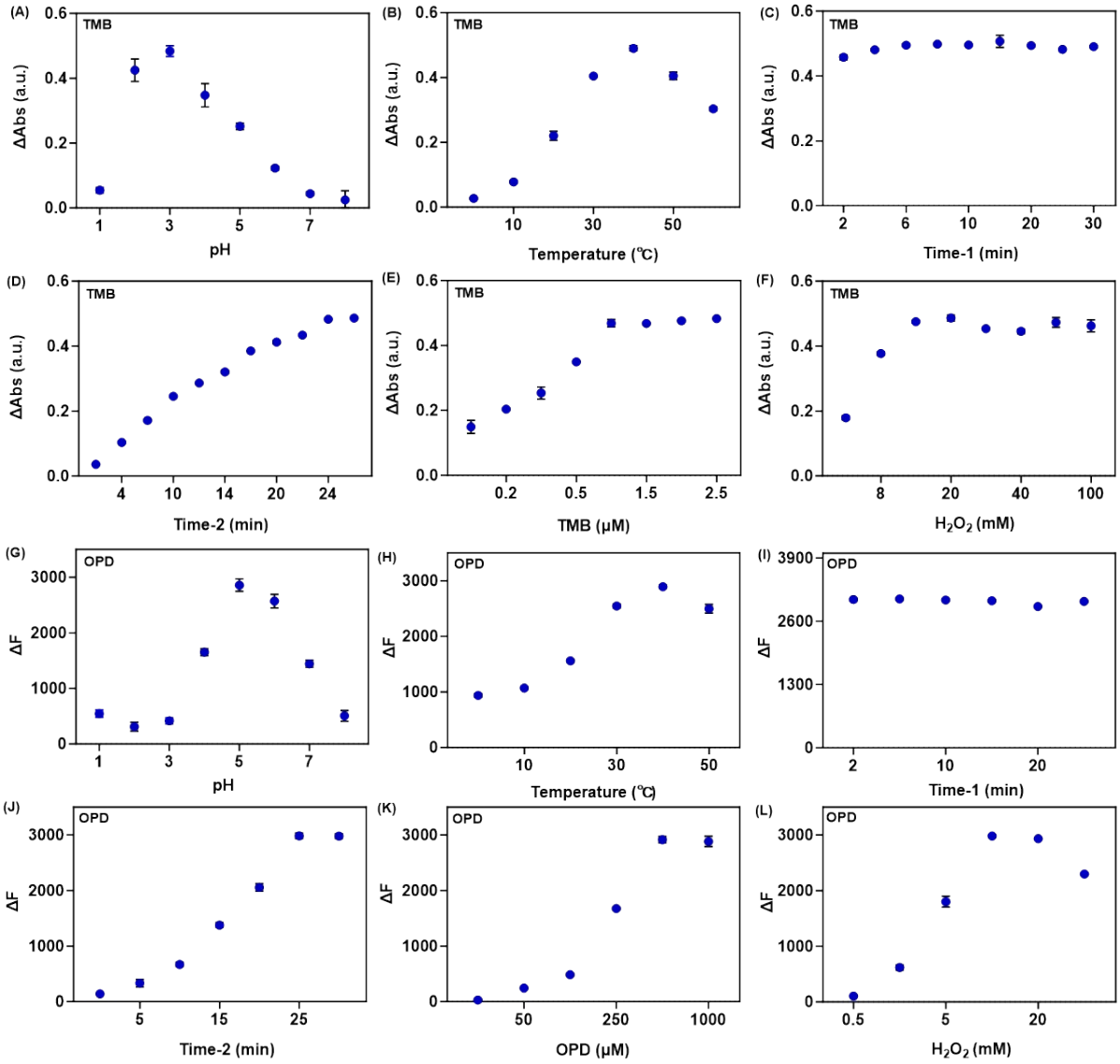

Fig. S2. Optimization of experimental conditions. Effects of pH (A), temperature (B), incubation time (C), chromogen development time (D), TMB concentration (E), and H_2O_2 concentration (F) on absorbance change (ΔA) of TMB-mediated system. Effects of pH (G), temperature (H), incubation time (I), chromogen development time (J), TMB concentration (K), and H_2O_2 concentration (L) on absorbance change (ΔA) of OPD-mediated system.

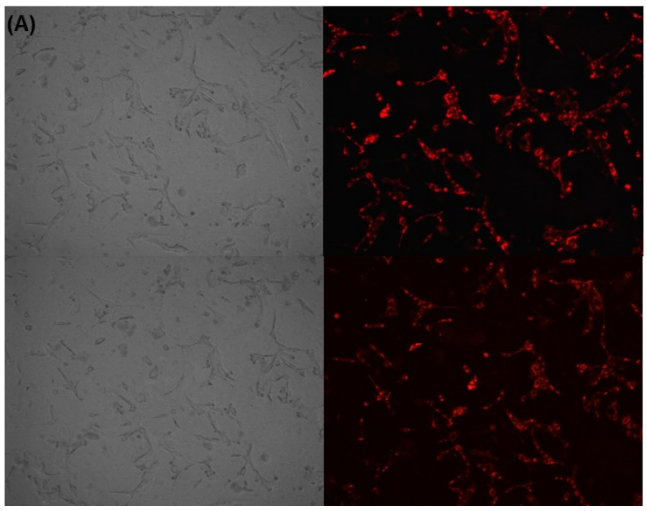

Fig. S3 Cell morphology of MDA-MB-231 cells labeled by DiL cell membrane probe

Table S1. Comparison of the analytical performance of recent Fe^{3+}-mediated fluorescence sensors for GSH detection.

Types	Method	Linear range (μM)	LOD (nM)	Reference
HOF-PyTTA	Fluorescence	0-400	880	[1]
ThA@Ag/Au NCs	Fluorescence	0.03-95	9.0	[2]
FeMoOv nanozyme	Fluorescence	0-100	76.5	This work

Reference

1. Chen, X.; Li, N.; Lin, T.; Huang, J.; Hou, L.; Zhao, S. An off–on Fluorescence Sensor Based on Hydrogen-Bonded Organic Frameworks for the Detection of Glutathione. *Microchemical Journal* **2024**, *196*, 109555, doi:10.1016/j.microc.2023.109555.
2. Alqahtani, Y.S.; Mahmoud, A.M.; Medleri Khateeb, M.; Ali, R.; El-Wekil, M.M. Near-Infrared Fluorescent Probe for Selective and Sensitive Detection of Glutathione Based on Thioctic Acid-Functionalized Ag/Au NCs-Assisted by Ferric Ion. *Microchemical Journal* **2024**, *201*, 110752, doi:10.1016/j.microc.2024.110752.