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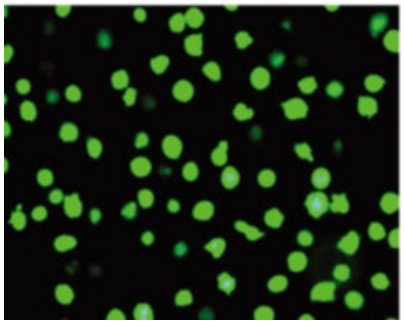
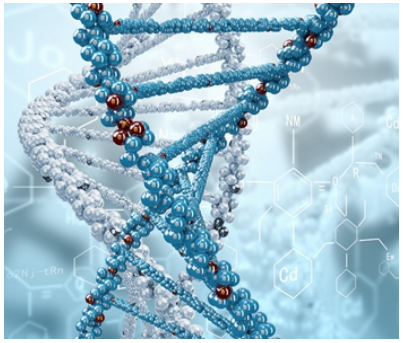
Protective effect of dihydropteridine reductase against oxidative stress is abolished with A278C mutation

Key words: Dihydropteridine reductase, TGF-β1, NOX4, SOD1, GPX3, Oxidative stress

Research Summary

This study mainly focused on the antioxidation of wild and mutated type of dihydrobiopterin reductase. They were found to play key roles in the following aspects:



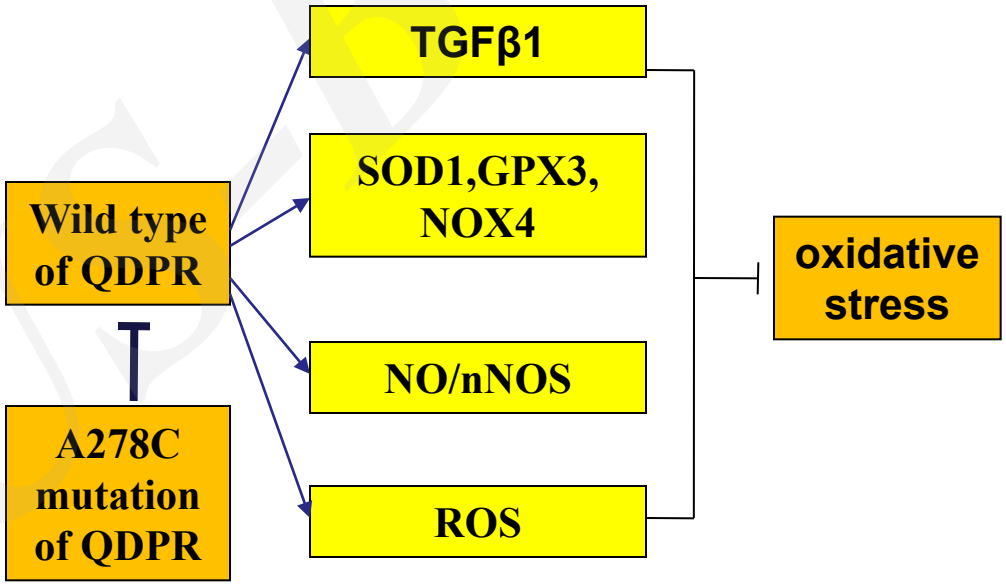


- **Regulation of reactive oxygen species and antioxidant enzymes**
- **Regulation of transforming growth factor β1**
- **Production of tetrahydrobiopterin**

Innovation points

- **Summary** of the most updated research progress about QDPR protein in vitro studies.

- **Emphasis** of the newly identified interplay between QDPR and oxidative stress.



Innovation points

A series of comprehensive figures were generated to summarize the latest knowledge about QDPR.

Figure 1 | Fusion protein, BH4, and nNOS levels are detected by QDPR overexpression.

Figure 2 | Effect of QDPR gene on ROS production.

Figure 3 | NOX4, SOD1, and GPX3 levels are regulated by QDPR overexpression.

Figure 4 | Effect of wide and mutated QDPR gene on TGF-β1 level.