

SUOX Gene

Subjects: **Genetics & Heredity**

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Sulfite oxidase: The SUOX gene provides instructions for making an enzyme called sulfite oxidase, which helps break down protein building blocks (amino acids) that contain sulfur when they are no longer needed.

genes

1. Normal Function

The *SUOX* gene provides instructions for making an enzyme called sulfite oxidase, which helps break down protein building blocks (amino acids) that contain sulfur when they are no longer needed. Specifically, sulfite oxidase is involved in the final step of this process, in which sulfur-containing molecules called sulfites are converted to other molecules called sulfates by adding an oxygen atom (a process called oxidation).

2. Health Conditions Related to Genetic Changes

2.1. Isolated sulfite oxidase deficiency

At least 27 *SUOX* gene mutations have been identified in people with isolated sulfite oxidase deficiency (ISOD), a severe disorder that causes brain damage and is generally fatal in the first months or years of life. The *SUOX* gene mutations that cause ISOD impair the function of sulfite oxidase, preventing complete breakdown of sulfur-containing amino acids. As a result, sulfites and other compounds left over from the partial breakdown process abnormally accumulate in the body. Researchers suggest that the nervous system is especially sensitive to this abnormal accumulation, and excessive levels of sulfite compounds that are toxic to the brain are thought to result in the brain damage that occurs in ISOD.

2.2. Polycystic ovary syndrome

3. Other Names for This Gene

- sulfite oxidase, mitochondrial

References

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