Email: hello@allozymes.com

Unspecific Peroxygenases (UPOs)

Unspecific peroxygenases (UPOs) are oxidative enzymes that catalyze the selective hydroxylation of C–H bonds using hydrogen peroxide as the sole oxidant. Acting as self-sufficient monooxygenases, they merge the catalytic range of cytochrome P450s with the operational simplicity of peroxidases — eliminating the need for auxiliary cofactors or electron-transfer partners.

By enabling regio- and stereoselective formation of secondary and tertiary alcohols under mild, aqueous conditions, UPOs provide a scalable and eco-efficient alternative to conventional metal-based oxidation chemistry. This makes them invaluable for late-stage functionalization, fine-chemical synthesis, and pharmaceutical intermediate production.

Get in Touch

Product Overview

At Allozymes, we develop engineered UPO variants designed for superior activity, stability, and substrate range. Leveraging our microfluidics-based enzyme discovery and screening platform, we identify UPOs capable of precise C–H bond activation across diverse chemical scaffolds.

Our UPO panels enable clean, enzyme-driven oxidation reactions that replace complex metal-catalyzed systems, reducing waste and improving selectivity. Operating efficiently with hydrogen peroxide as a green oxidant, these biocatalysts deliver high conversion, excellent enantioselectivity, and scalability for modern oxidation workflows in pharmaceuticals, fine chemicals, and specialty biomanufacturing.

Product Specifications

Product Name	Unspecific Peroxygenases
Applications	Biocatalysis, Biomanufacturing
Form	Freeze-dried powder
Storage	-20°C

Allozymes also offers a range of specialized enzymes for research and industrial applications.
Get in touch with us to explore the right enzyme solution for your project.