Arogenate dehydratase

Cat. No.: HY-E70125

CAS No.: 76600-70-9

Target: Biochemical Assay Reagents

Pathway: Others

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.

Arogenate dehydratase

BIOLOGICAL ACTIVITY

Description	Arogenate dehydratase (Carboxycyclohexadienyl dehydratase) is the key enzymes that catalyze the conversion of arogenate into Phe in the stroma of chloroplasts and plastids in vascular plants. Arogenate dehydratase plays an important role in cell wall lignin biosynthesis, photosynthesis, and can be used for plant improvement[1][2][3].
In Vivo	Arogenate dehydratase (Carboxycyclohexadienyl dehydratase) mutants of Arabidopsis reduces lignin contents and decreases in stem weights and lengths to -90% of WT levels) in Arabidopsis[1]. Arogenate dehydratase mutants of Arabidopsis causes embryo arrest and seed abortion at the globular stage in Arabidopsis [2]. Arogenate dehydratase mutants of Arabidopsis reduces carbon flux into Phe biosynthesis and impairs the consumption of photosynthetically produced ATP, leading to an increased ATP/ADP ratio, the overaccumulation of transitory starch, and lower electron transport rates [3]. Arogenate dehydratase mutants reduces flavonoid, phenylpropanoid, lignan, and glucosinolate contents in Arabidopsis[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Oliver R A Corea ,et al. Arogenate dehydratase isoenzymes profoundly and differentially modulate carbon flux into lignins. J Biol Chem. 2012 Mar 30;287(14):11446-59.

[2]. El-Azaz J, et al. The Arogenate Dehydratase ADT2 is Essential for Seed Development in Arabidopsis. Plant Cell Physiol. 2018;59(12):2409-2420.

[3]. Höhner R, et al. Reduced Arogenate Dehydratase Expression: Ramifications for Photosynthesis and Metabolism. Plant Physiol. 2018;177(1):115-131.

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