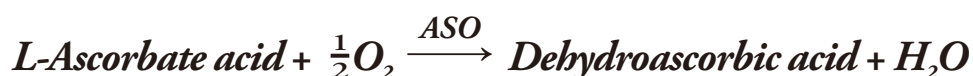


# ASCORBATE OXIDASE

L-Ascorbate:oxygen oxidoreductase

## REACTION:



## PRODUCT DESCRIPTION

Catalog No.:	qs50037
Appearance:	Blue amorphous powder
Source:	Plant
Enzyme Commission Number:	EC 1.10.3.3
CAS Number:	9029-44-1
Storage temperature:	-20°C
activity:	≥ 100U/mg solid
Unit definition:	One unit causes the decrease of one micromole of ascorbic acid per min at pH 5.6 at 30°C.

## PROPERTIES

Molecular weight:	67kDa (SDS-PAGE)	
Michaelis constant:	$3.6 \times 10^{-4}\text{M}$	
Optimum pH:	6.0	{Fig. 1}
Optimum temperature:	50°C	{Fig. 3}
pH Stability:	5.5-9.5 (25°C, 20hr)	{Fig. 2}
Thermal stability:	< 50°C (pH 7.0, 30min)	{Fig. 4}
Inhibitors:	$\text{Fe}^{3+}$ , $\text{Ni}^{2+}$ , BME, SDS, Proclin	
Effect of various chemicals:		{Table 1}

**Table 1.**

**Effect of Various Chemicals on ASO**

[The enzyme dissolved in 50mM PIPES buffer, pH 7.5 (10U/ml) was incubated with each chemical at 37°C for 2hr.]

Chemical	Concn. (mM)	Residual activity
None	-	100%
CaCl <sub>2</sub>	2.0	100%
CoCl <sub>2</sub>	2.0	102%
CuSO <sub>4</sub>	2.0	160%
FeCl <sub>3</sub>	2.0	76%
MgSO <sub>4</sub>	2.0	104%
MnSO <sub>4</sub>	2.0	100%
NiCl <sub>2</sub>	2.0	70%
ZnSO <sub>4</sub>	2.0	102%

Chemical	Concn. (mM)	Residual activity
BME	2.0	80%
NEM	2.0	93%
EDTA	5.0	102%
NaN <sub>3</sub>	20.0	97%
Proclin	0.045%	73%
Na-cholate	0.10%	111%
SDS	0.05%	8%
Triton X-100	0.10%	108%
Tween 20	0.10%	112%

