sulfiredoxin

Cat. No. EXWM-1683

Lot. No. (See product label)

Introduction

Description	In the course of the reaction of EC 1.11.1.15, peroxiredoxin, its cysteine residue is alternately oxidized to the sulfenic acid, S-hydroxycysteine, and reduced back to cysteine. Occasionally the S-hydroxycysteine residue is further oxidized to the sulfinic acid S-hydroxy-S-oxocysteine, thereby inactivating the enzyme. The reductase provides a mechanism for regenerating the active form of peroxiredoxin, i.e. the peroxiredoxin-(S-hydroxycysteine) form. Apparently the reductase first catalyses the phosphorylation of the -S(O)-OH group by ATP to give -S(O)-O-P, which is attached to the peroxiredoxin by a cysteine residue, forming an -S(O)-S- link between the two enzymes. Attack by a thiol splits this bond, leaving the peroxiredoxin as the sulfenic acid and the reductase as the thiol.
Synonyms	Srx1; sulphiredoxin; peroxiredoxin-(S-hydroxy-S-oxocysteine) reductase

Product Information

Form	Liquid or lyophilized powder
EC Number	EC 1.8.98.2
CAS No.	710319-61-2
Reaction	peroxiredoxin-(S-hydroxy-S-oxocysteine) + ATP + 2 R-SH = peroxiredoxin-(S-hydroxycysteine) + ADP + phosphate + R-S-S-R
Notes	This item requires custom production and lead time is between 5-9 weeks. We can custom produce according to your specifications.

Storage and Shipping Information

Storage	Store it at +4 ℃ for short term. For long term storage, store it at -20 ℃~-80 ℃.