Lipoxidase preparation
from Glycine max (soybean)

Product Number  L 7395
Storage Temperature  -0 °C

**Product Description**

CAS Number:  9029-60-1  
Enzyme Commission (EC) Number:  1.13.11.12  
Molecular weight:  108 kDa (homodimer) 1  
pl:  5.65 2  (see below)  
Synonyms:  Lipoxygenase 3

This enzyme has been characterized in terms of substrate specificity (specific for a cis, cis-1,4-pentadiene system), 4,5 and in terms of the effects of pH, temperature, inhibitors, and substrate competition on activity. 6

This enzyme has activity over a wide pH range. However, the enzymatic assay is performed at pH 9 to help keep the substrate (linoleic acid) in solution. 7

Isoelectric focusing on this product indicates six bands in the pI range of 4.5-6.5, with a high proportion in the pH region of 6.0-6.5. It has not been determined which of those six bands represent isoenzymes of lipoxidase.

Several compounds have been tested for their ability to inhibit lipoxidase.

1. The following compounds specifically inhibit all known lipoxidases:
   - 5,8,11,14-Eicosatetraynoic Acid (Product No. E 1768)
   - Nordihydroguaiaretic acid (Product No. N 1144), 3-tert-butyl-4-hydroxyanisole, (Product No. B 6655),
   - Salicylhydroxamic acid (Product No. S 60-7),
2. One compound, butylated hydroxytoluene (Product No. B 1378) inhibits some lipoxidases.
3. The following compounds inhibit some related enzymes, but they are not inhibitors of lipoxidase.
   - Acetylsalicylic acid (Product No. A 5376),
   - Indomethacin (Product No. I 7378),
   - Metyrapone (Product No. 85,652-5).

   The concentration of each putative inhibitor is given in the reference. 8

**Precautions and Disclaimer**

For Laboratory Use Only. Not for drug, household or other uses.

**Preparation Instructions**

This product is soluble in borate buffer, pH 9, (0.1 mg/ml), yielding a clear, colorless solution.

**References**

3. Enzyme Nomenclature, (1992), p. 120.

IRB/NSB 1/03

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