

Cyclooxygenase (COX)

Cat. No. COX-38 Lot. No. (See product label)

SPECIFICATION

Product Overview

Description	COX (Cyclooxygenase): catalyzes the conversion of C=C bonds to epoxide.
Applications	1. Normally, haloperoxidase reaction system includes: substrate, buffer, enzyme, H ₂ O ₂ and halogen ion. Styrene monooxygenase reaction system includes substrate, buffer, enzyme, coenzyme and coenzyme regeneration system 2. COX should be added last into reaction system, after the pH and temperature been adjusted to the reaction condition.
Notes	Never contact with extreme conditions such as: high temperature, high/low pH and high concentration organic solvent.
Storage	Keep 2 years below -20 centigrade.
Advantages	1. High substrate specificity. 2. Strong chiral selectivity. 3. High conversion. 4. Less by-products. 5. Mild reaction conditions. 6. Environmentally friendly.

GENE INFORMATION

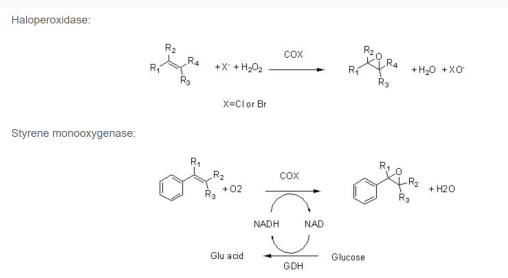
Official Symbol	COX
Synonyms	Cyclooxygenase; COX

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

Catalytic reaction type



Application Examples

Entry	Substrate ^a	Product	Yield (%)	Relative activity ^b (%)	ee (%)
1	Styrene 1a	1b	>99	100	>99
2	R ¹ = Me 2a	2b	92	97	>99
3	R ¹ = Me 3a	3b	87	93	>99
4	R ¹ , R ² = Me 4a	4b	68	71	>99
5	R ¹ = -CH ₂ -CH ₃ 5a	5b	58	64	86
6	R ¹ = Et 6a	6b	45	51	>99
7	R ¹ = Et 7a	7b	6	10	>99
8	R ¹ = Et 8a	8b	35	39	>99
9	R ¹ = n-Pr 9a	9b	12	15	>99
10	R ¹ = n-Pr 10a	10b	1	3	>99
11	R ¹ = i-Pr 11a	11b	11	15	>99
12	R ¹ = n-Pr 12a	12b	5	7	>99
13	R ¹ = -CH ₂ CH ₂ CH ₂ -OH 13a	13b	>99	107	>99 (syn:anti) 1:1
14 ^c	R ¹ = -CH ₂ CH ₂ OH 14a	14b	>99	271	>99
15	R ¹ = -CH ₂ Cl 15a	15b	75 ^d	80	>99
16	R ¹ , R ² = -(CH ₂) ₆ - 16a	16b	7	9	65
17	17a	17b	76	77	>99
18	18a	18b	65	70	>99

Synthesis of epoxy styrene derivatives from styrene derivatives