

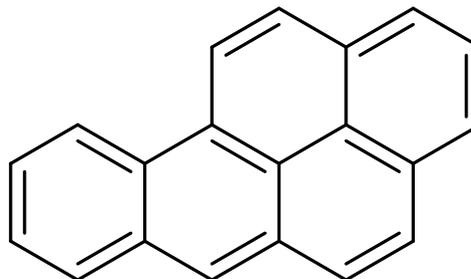
Benzo[a]pyrene

Catalog number: B-0050

Molecular Formula: $C_{20}H_{12}$

MW: 252.31

CAS: 50-32-8



Solubility: Toluene, benzene, xylene, chloroform. Sparingly soluble in Ethanol & Methanol. Insoluble in Water.

Storage and Handling: Store dry at room temperature. Stock solutions should be stored frozen (-20 °C or below).

Background: Benzo[a]pyrene (BaP) is a procarcinogenic polyaromatic hydrocarbon (PAH) found in coal tar and other byproducts from the combustion of organic material. It is metabolized by cytochrome P450 1A1 (CYP1A1) to benzo[a]pyrene-7,8-dihydrodiol-9,10-epoxide which is carcinogenic. This metabolite intercalates DNA thus disrupting DNA copying and inducing mutations. Benzo[a]pyrene is used as a chemical carcinogen in cancer models.

References: 1) Gamber, H.B. *et al.* "Mechanism of benzo[a]pyrene diol epoxide induced deoxyribonucleic acid strand scission." *Biochemistry*, 1980, 19, 3948-3956. 2) Galvez-Peralta, M. *et al.* "Oral benzo[a]pyrene in Cyp1a1/1b1(-/-) double-knockout mice: Microarray analysis during squamous cell carcinoma formation in preputial gland duct." *Int. J. Cancer.*, 2013, 32, 2065 3) Operana, T.N. "Human CYP1A1GFP expression in transgenic mice serves as a biomarker for environmental toxicant exposure." *Toxicol. Sci.*, 2007, 95, 98-107

Hazardous Properties and Cautions: This chemical is classified as a carcinogen and a mutagen. For further information see the MSDS on request. This product is manufactured and shipped only in small quantities, intended for research and development in a laboratory utilizing prudent procedures for handling chemicals of unknown toxicity, under the supervision of persons technically qualified to evaluate potential risks and authorized to enforce appropriate health and safety measures. As with all research chemicals, precautions should be taken to avoid unnecessary exposures or risks.

Warranty and Disclaimer: Echelon warrants the product conforms to the specifications stated herein. In the event of nonconformity, Echelon will replace products or refund purchase price, at its sole option, and Echelon shall not be responsible for any other loss or damage, whether known or foreseeable to Echelon. No other warranties apply, express or implied, including but not limited to warranty of fitness for any purpose or implied warranty of merchantability. Purchaser is solely responsible for all consequences of its use of the product and Echelon assumes no responsibility therefore, including success of purchaser's research and development, or health or safety of any uses of the product.

