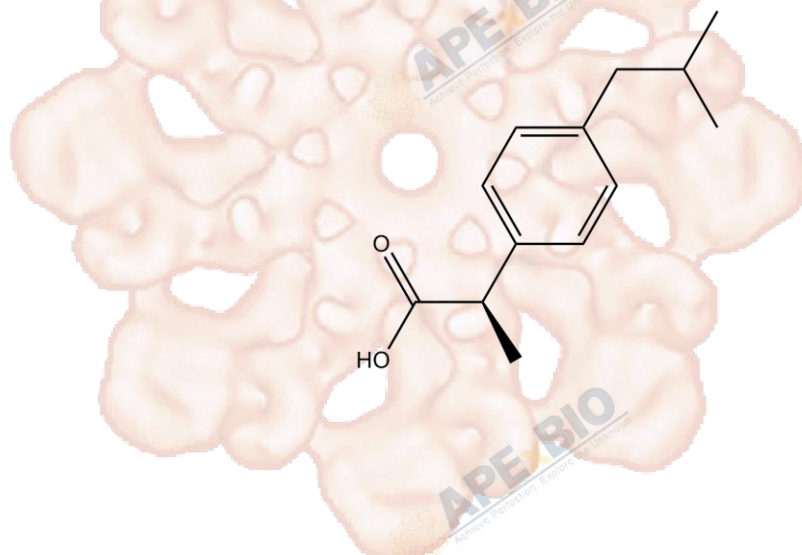


# Product Data Sheet

## Ibuprofen

<b>Cat. No.:</b>	A8446
<b>CAS No.:</b>	15687-27-1
<b>Formula:</b>	C <sub>13</sub> H <sub>18</sub> O <sub>2</sub>
<b>M.Wt:</b>	206.28
<b>Synonyms:</b>	
<b>Target:</b>	Neuroscience
<b>Pathway:</b>	COX
<b>Storage:</b>	Store at -20°C



### Solvent & Solubility

insoluble in H<sub>2</sub>O; ≥10.31 mg/mL in DMSO; ≥50.2 mg/mL in EtOH

In Vitro

Preparing Stock Solutions	Solvent	Mass		
		1mg	5mg	10mg
	<b>Concentration</b>			
	<b>1 mM</b>	4.8478 mL	24.2389 mL	48.4778 mL
	<b>5 mM</b>	0.9696 mL	4.8478 mL	9.6956 mL
	<b>10 mM</b>	0.4848 mL	2.4239 mL	4.8478 mL

Please refer to the solubility information to select the appropriate solvent.

### Biological Activity

Shortsummary

inhibitor of cyclooxygenase 1 and cyclooxygenase 2

IC<sub>50</sub> & Target

In Vitro

#### Cell Viability Assay

Cell Line:	p53 wild-type or p53-deficient human colon cancer HCT-116 cell lines
Preparation method:	The solubility of this compound in DMSO is > 10 mM. General tips for obtaining a higher concentration: Please warm the tube at 37°C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.
Reacting conditions:	0-1000 μM; 24 h (cell cycle distribution) or 72 h (apoptosis).

	Applications:	In a colony forming assay, S-ibuprofen and R-ibuprofen exhibited significantly higher anti-proliferative effects in the p53wt cell line than in the p53-deficient HCT-116 cells. In HCT-116 p53wt cells, 800-1000 $\mu$ M S-ibuprofen and R-ibuprofen reduced cells in the S and G2/M phases and significantly increased the number of cells in the G0/G1-phase. 800-1000 $\mu$ M S- and R-ibuprofen also significantly increased apoptosis.
In Vivo	<b>Animal experiment</b>	
	Animal models:	Athymic nude mice xenografted with implanted subcutaneously with HCT-116 p53wt and p53-/- colon cancer cells
	Dosage form:	five days a week intraperitoneally with 15 mg/kg/day, suspended in PBS (pH 7), 5 weeks
	Applications:	Compared with the tumour volumes of untreated mice, R-ibuprofen significantly reduced the growth of p53wt expressing xenografts. S-ibuprofen also reduced the growth of p53wt expressing xenografts. But only a small and non-significant inhibition of HCT-116 p53-/- tumour growth after S- or R-ibuprofen treatment.
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

## Product Citations

See more customer validations on [www.apexbt.com](http://www.apexbt.com).

## References

[1]. Janssen A, Schiffmann S, Birod K, et al. p53 is important for the anti-proliferative effect of ibuprofen in colon carcinoma cells. *Biochem Biophys Res Commun*, 2008, 365(4): 698-703.

## Caution

**FOR RESEARCH PURPOSES ONLY.**

**NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**

*Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.*



**APEx BIO Technology**

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