Data Sheet

Product Name: Nabumetone
Cat. No.: CS-2669
CAS No.: 42924-53-8
Molecular Formula: C15H16O2
Molecular Weight: 228.29
Target: COX
Pathway: Immunology/Inflammation
Solubility: DMSO : ≥ 100 mg/mL (438.04 mM); H2O : < 0.1 mg/mL (insoluble)

BIOLOGICAL ACTIVITY:
Nabumetone is an orally active non-acidic anti-inflammatory agent, acts as a potent and selective COX-2 inhibitor, and is the prodrug of the active metabolite 6MNA. IC50 & Target: COX-2[1].

**In Vitro:** Nabumetone is a potent and selective COX-2 inhibitor. Nabumetone (50 μmol-2 mmol) dose-dependently inhibits the proliferation of K-562 and Meg-01 cells, but shows no obvious apoptotic effect. Nabumetone potentiates the apoptotic effect of ADR in the K-562 cell line. Moreover, Nabumetone reduces Bcl-2 expression[1].

**In Vivo:** Nabumetone (79 mg/kg, p.o.) inhibits paw oedema and paw exudate PGE2 in rats. Nabumetone does not induce gastric damage and causes only 57% inhibition of gastric mucosal 6-keto-PGF1α production in rats[2]. Nabumetone (25, 50, 100 mg/kg, i.p.) dose-dependently inhibits the increase of DDC-induced mucus secretion and stimulates stress-induced mucus secretion in rats. Nabumetone (25 mg/kg, i.p.) significantly suppresses stress-induced ulcer index in rats[3].

PROTOCOL (Extracted from published papers and Only for reference)

**Cell Assay:** Nabumetone is dissolved in DMSO[1],[1] Every cell line is plated into 6-well plates at a concentration of 3 × 10⁵/mL with or without drugs (Nabumetone, etc.) and incubated for 48 h. Viable cells are then counted using the trypan blue dye exclusion test. The percentage of proliferation inhibition is calculated as 1-(viable cells exposed to drug/viable cells in control) ×100[1].

**Animal Administration:** Nabumetone is formulated in DMSO/saline 1:4?v/v[3],[3] Rats[3] Albino male rats (250- to 300-g body weight) are used in the study. The animals are maintained in a single cage and are deprived of food for 16 h before the onset of experiments. Free access to water is allowed until 1 h before the beginning of experiments. There are eight rats in each group. The animals are pretreated with intraperitoneal injections of Nabumetone or dipyrone at 25-, 50-, or 100-mg/kg doses for 3 days[3].

References:


CAIndexNames:
2-Butanone, 4-(6-methoxy-2-naphthalenyl)-
Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 732-484-9848  Fax: 888-484-5008  E-mail: sales@ChemScene.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA