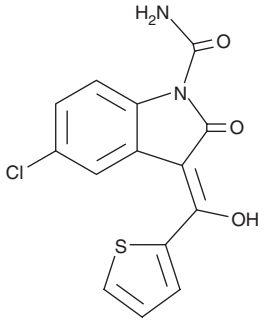
# PRODUCT INFORMATION

## Tenidap

*Item No. 17413*



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| **CAS Registry No.:** | 120210-48-2 |
| **Formal Name:** | (3Z)-5-chloro-2,3-dihydro-3-(hydroxy-2-thienylmethylene)-2-oxo-1H-indole-1-carboxamide |
| **Synonym:** | CP 66,248 |
| **MF:** | $C_{14}H_9ClN_2O_3S$ |
| **FW:** | 320.8 |
| **Purity:** | ≥98% |
| **UV/Vis.:** | $\lambda_{max}$: 219, 273, 370 nm |
| **Supplied as:** | A crystalline solid |
| **Storage:** | -20°C |
| **Stability:** | ≥4 years |

*Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.*

### Laboratory Procedures

Tenidap is supplied as a crystalline solid. A stock solution may be made by dissolving the tenidap in the solvent of choice. Tenidap is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of tenidap in these solvents is approximately 20 and 10 mg/ml, respectively. It is also slightly soluble in ethanol.

### Description

Tenidap is a COX-1 selective non-steroidal anti-inflammatory drug ($IC_{50}$s = <0.03, 1.2, and >30 µM for COX-1, COX-2, and 5-lipoxygenase (5-LO), respectively).[1] It has anti-inflammatory and antirheumatic properties.[1,2] *In vitro*, it inhibits prostaglandin $D_2$ ($PGD_2$), leukotriene $B_4$ ($LTB_4$), and prostaglandin $E_2$ ($PGE_2$) synthesis ($IC_{50}$s = 0.02, 18, and 32 µM, respectively).[3,4] Tenidap also reversibly and dose-dependently activates $hK_{ir}2.3$ channels in CHO cells ($EC_{50}$ = 402 nM) and inhibits fatty acid amide hydrolase (FAAH) activity.[5,6] A formulation containing tenidap was not approved for rheumatoid and osteoarthritis by the FDA due to adverse effects, including bone mineralization loss, as well as liver and kidney toxicity.

### References


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2. Blackburn, W.D., Jr., Prupas, H.M., Silverfield, J.C., *et al.* Tenidap in rheumatoid arthritis. A 24-week double-blind comparison with hydroxychloroquine-plus-piroxicam, and piroxicam alone. *Arthritis Rheum.* **38(10)**, 1447-1456 (1995).
3. Moilanen, E., Alanko, J., Asmawi, M.Z., *et al.* CP-66,248, a new anti-inflammatory agent, is a potent inhibitor of leukotriene $B_4$ and prostanoid synthesis in human polymorphonuclear leucocytes *in vitro*. *Eicosanoids* **1(1)**, 35-39 (1988).
4. Moore, P.F., Larson, D.L., Otterness, I.G., *et al.* Tenidap, a structurally novel drug for the treatment of arthritis: Antiinflammatory and analgesic properties. *Inflamm. Res.* **45(2)**, 54-61 (1996).
5. Liu, Y., Liu, D., Printzenhoff, D., *et al.* Tenidap, a novel anti-inflammatory agent, is an opener of the inwardly rectifying $K^+$ channel $hK_{ir}2.3$. *Eur. J. Pharmacol.* **435(2-3)**, 153-160 (2002).
6. Bertolacci, L., Romeo, E., Veronesi, M., *et al.* A binding site for nonsteroidal anti-inflammatory drugs in fatty acid amide hydrolase. *Journal of the American Chemical Society* **135(1)**, 22-25 (2013).





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