

Tapentadol

Urine HEIA[®] Drug Screening Kit



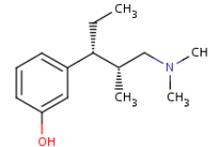
Tapentadol is a centrally-acting synthetic analgesic with a dual mode of action as an agonist at the μ -opioid receptor and as a norepinephrine reuptake inhibitor. The drug is used to manage moderate to severe acute pain. It provides analgesia at similar levels of more potent narcotic analgesics such as hydrocodone, oxycodone, and meperidine with a more tolerable side effect profile.¹

Administration: Oral, round tablets available in 50, 75, and 100 mg strengths

Elimination: Tapentadol and its metabolites are excreted via the kidneys (99%). The terminal half-life is on average 4 hours. The major pathway of tapentadol metabolism is conjugation with glucuronic acid to produce glucuronides. A total of 3% of drug is excreted in urine as unchanged drug. Tapentadol is additionally metabolized to n-desmethyl tapentadol (13%) by CYP2C9 and CYP2C19 and to hydroxy tapentadol (2%) by CYP2D6, which are further metabolized by conjugation.²

Abuse Potential: Tapentadol can be abused in a manner similar to other opioid agonists, legal or illicit. It is generally abused by crushing, chewing, snorting, or injection. These practices pose a significant risk to the abuser that could result in overdose and death.²

Tapentadol



Formula: C₁₄H₂₃NO

Systematic Name:
3-[(1R,2R)-3-(dimethylamino)-1-ethyl-2-methylpropyl]phenol hydrochloride

Brand Names: Nucynta[®]

- Exclusively from Immunalysis
- Accurate and trusted results
- Liquid stable and ready to use

1. Tzschentke, T.M. et al. (1R,2R)-3-(3-Dimethylamino-1-ethyl-2-methyl-propyl)-phenol Hydrochloride (Tapentadol HCl): A Novel-Opioid Receptor Agonist/Norepinephrine Reuptake Inhibitor with Broad-Spectrum Analgesic Properties. *Journal of Pharmacology and Experimental Therapeutics*. 323(1): 265-76 (2007).

2. PriCara[®], Division of Ortho-McNeil-Janssen Pharmaceuticals, Inc. NUCYNTA[®] (Tapentadol) Immediate-Release Oral Tablets Full Prescribing Information. Rev 11/10.



Tapentadol Urine HEIA® Drug Screening Kit

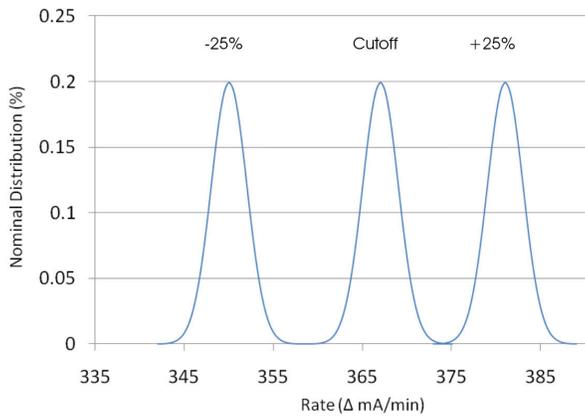
Assay Specifications

Methodology: Homogeneous enzyme immunoassay

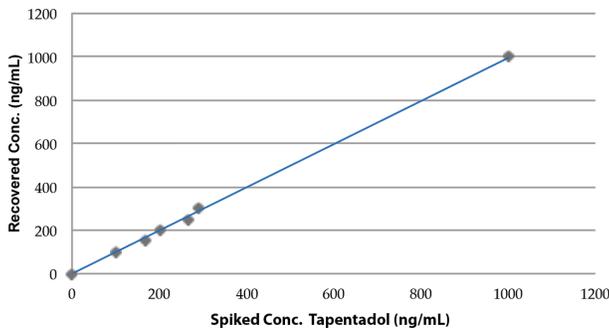
Cutoff: 200 ng/mL

Calibrator Range: 0-1000 ng/mL

Overlap: Tapentadol (200 ng/mL cutoff)



Analytical Recovery: Tapentadol



Semi-Quantitative Precision at 200 ng/mL

Interday Precision (N = 80)

Concentration	Mean Conc. (ng/mL)	C.V.%
100 ng/mL	96.5	7.0
150 ng/mL (control LOW)	152.3	6.8
200 ng/mL calibrator	189.8	5.8
250 ng/mL (control HIGH)	240.9	6.1
300 ng/mL	301.0	8.3
1000 ng/mL	972.1	5.7

Semi-Quantitative Cross-Reactivity at 200 ng/mL

Analyte	Analyte Concentration (ng/mL)	Tapentadol Equivalents (ng/mL)	Cross-Reactivity (%)
Tapentadol	200	200	100
Tapentadol Glucuronide	800	217	27
N-Desmethyl Tapentadol	9,500	203	2.1
Chlorpromazine	120,000	183	0.2
Cyclobenzapine	120,000	195	0.2
Doxepin	120,000	187	0.2
Imipramine	120,000	183	0.2
Tramadol	60,000	202	0.3
Trimipramine	85,000	190	0.2

Accuracy:

		LC-MS/MS Confirmation (50 ng/mL)	
		Positive	Negative
HEIA (200 ng/mL)	Positive	72	2
	Negative	2	115

Order - Tapentadol (HEIA)

Catalog Number Description

343-0025	25 mL kit
343-0060W	60 mL wedge kit
343-0100	100 mL kit
343-0500	500 mL kit
C343-10-1	200 ng/mL calibrator
C343-10-2	150 and 250 ng/mL controls
C343-10-5	0, 100, 200, 300, and 1000 ng/mL calibrators
Neg-10-1	10 mL negative reference calibrator

The charts and data provided above were generated in studies conducted by Immunalysis Corporation. This information is intended to be representative of the performance of the assay. Refer to the product insert for a full description of the performance characteristics for semi-quantitative and qualitative testing. For forensic use only.