

# Buprenorphine

Urine HEIA® Drug Screening Kit

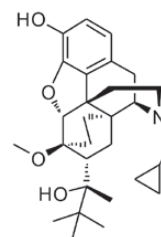
IMMUNALYSIS®

Buprenorphine is a semi-synthetic opiate with partial agonist and antagonist actions. It is a powerful analgesic, 25 to 40 times more potent than morphine. It is used for the treatment of moderate to severe pain, peri-operative analgesia and opioid dependence. Overdose symptoms of the drug include confusion, dizziness, pinpoint pupils, hallucinations, hypotension, respiratory difficulty, seizures, and coma.<sup>1</sup>

**Administration:** Injection, infusion, transdermal patch, or sublingual tablet.

**Elimination:** Buprenorphine is metabolized by N-dealkylation to norbuprenorphine, followed by glucuronide conjugation of both buprenorphine (BUP) and norbuprenorphine (nor-BUP) for excretion in urine. The amount of norbuprenorphine metabolite excreted in urine generally exceeds that of conjugated buprenorphine.<sup>2</sup>

**Abuse Potential:** Buprenorphine is subject to abuse and diversion. It is often used recreationally by insufflation, and is commonly used by illicit users to prevent withdrawals in between doses of their opiate of choice.



**Formula:** C<sub>29</sub>H<sub>41</sub>NO<sub>4</sub>

**Systematic Name:**  
(2S)-2-[(5R,6R,7R,14S)-9α-cyclopropylmethyl-4,5-epoxy-6,14-ethano-3-hydroxy-6-methoxymorphinan-7-yl]-3,3-dimethylbutan-2-ol

**Brand Names:** Suboxone®, Subutex®, Buprenex®, Temgesic®, Transtec®

- Accurate and trusted results
- Liquid stable and ready to use

## Assay Specifications

**Methodology:** Homogeneous enzyme immunoassay

**Cutoff:** 5 ng/mL

**Calibration Range:** 0-40 ng/mL

## Accuracy:

		LC-MS Confirmation (5 ng/mL)	
		Positive	Negative
HEIA (5 ng/mL)	Positive	40	0
	Negative	0	40

## Cross-Reactivity

Analyte	Analyte Concentration (ng/mL)	Cross-Reactivity (%)
Buprenorphine	5	100.00
Norbuprenorphine	5.5	90.91
Buprenorphine Glucuronide	3,000	0.17
Norbuprenorphine Glucuronide	4,000	0.13

The following analytes were tested for cross-reactivity at 100,000 ng/mL and none were detected: 6-acetyl morphine, codeine, dihydrocodeine, EDDP, EMDP, ethyl morphine, heroin, hydrocodone, hydromorphone, LAAM, levorphanol, methadone, meperidine, morphine-3-gluc., morphine, morphine-6-gluc., nalorphine, naloxone, naltrexone, norpropoxyphene, oxycodone, and oxymorphone.

## Semi-Quantitative Precision at 5 ng/mL

Interday Precision (N = 80)

Concentration	Result	Total Result
2.5 ng/mL	NEG	80 Negative
3.75 ng/mL (control LOW)	NEG	80 Negative
5 ng/mL calibrator	n/a	33 Negative/ 47 Positive
6.25 ng/mL (control HIGH)	POS	80 Positive
7.5 ng/mL	POS	80 Positive

## Order - Buprenorphine (HEIA)

Catalog Number	Description
336UR-0025	25 mL kit
336UR-0060W	60 mL wedge kit
336UR-0100	100 mL kit
336UR-0500	500 mL kit
C336UR-10-1	5 ng/mL calibrator
C336UR-10-2	3.75 and 6.25 ng/mL controls
C336UR-10-5	0, 5, 10, 20 and 40 ng/mL calibrators
Neg-10-1	10 mL negative calibrator

1. R.C. Baselt and R. H. Cravey. Disposition of Toxic Drugs and Chemicals in Man. 4th edition. 93.

2. E.J. Cone, C.W. Gorodetzky, D. Yousefnejad et al. The Metabolism and Excretion of Buprenorphine in Humans. Drug Met Disp 12: 577-581 1983.

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 in vitro diagnostic use.

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