

Benzodiazepine ELISA Kits for Forensic Drug Detection

Benzodiazepine Background

Since their introduction in the 1960s, benzodiazepines have been widely prescribed to treat anxiety, insomnia, muscle spasms, alcohol withdrawal, and seizure prevention as they are depressants of the central nervous system. Although they are highly effective for their intended use, benzodiazepines are prescribed with caution as they can be highly addictive.

Common street names of benzodiazepines include benzos and downers. The most encountered benzodiazepines on the illicit market are alprazolam (Xanax), lorazepam (Ativan), clonazepam (Klonopin), diazepam (Valium), and triazolam (Halcion).

NEOGEN® offers Benzodiazepine Group ELISA and Benzodiazepine Group Ultra ELISA that successfully detect more than 20 analytes, including the top encountered benzodiazepines and designer benzodiazepines.

With our 30-year history of developing ELISA test kits and reagents, laboratories trust us to be their preferred forensic ELISA test kit source. Reviewing the sensitivity and specificity information for each kit is the best way to determine which kit is most appropriate for your screening requirements.

Reference

Department of Justice and Drug Enforcement Administration. "Drug Fact Sheet. Benzodiazepines." April 2020. https://www.dea.gov/sites/default/files/2020-06/Benzodiazepenes-2020_1.pdf.

Product Features

- Ultimate detection of major drug analyte oxazepam.
- Ultra-sensitive detection of more than 20 benzodiazepines, including phenazepam, etizolam, delorazepam, diclazepam, pyrazolam, flubromazepam, alprazolam, lorazepam, clonazepam, diazepam, temazepam, cloniprazepam, flubromazolam, and clonazolam.
- Validated for human urine, whole blood, and oral fluid.

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Benzodiazepine ELISA Kits for Forensic Drug Detection

Benzodiazepine Group #130119 (96-well)/#130115 (480-well)

Compound	I-50 (ng/mL)	% Cross-reactivity
Oxazepam	5.81	100
Flualprazolam	1.24	467
Diazepam	1.34	434
Estazolam	1.60	365
Nordiazepam	1.61	361
Alprazolam	1.68	346
Tetrazeepam	2.20	264
Flurazepam	2.22	262
Flubromazolam	2.30	253
Lormetazepam	2.52	231
Prazepam	2.94	198
Temazepam	3.02	192
Phenazepam	3.05	190
Halazepam	3.36	173
Triazolam	3.39	171
7-amino-Flunitrazepam	3.94	147
Diclazepam	4.10	142
Nitrazepam	4.11	141
Clonazolam	5.81	120
Flubromazepam	4.83	120
N-desmethyl Flunitrazepam	4.89	119
Delorazepam	4.91	115
Flunitrazepam	5.29	110
Pyrazolam	5.40	106
Etizolam	6.55	87
Bromazepam	6.80	85
Clonazepam	7.31	79
Nimetazepam	7.90	74
Lorazepam	8.27	70
Midazolam	8.93	65
Clobazam	9.93	59
7-amino-Clonazepam	14.78	39
alpha-hydroxy Alprazolam	23.65	25
Chlordiazepoxide	31.03	19

■ Indicates Designer Benzodiazepines

Note: Oxazepam equivalents represents 50% B/B0 assay displacement in EIA Buffer.

Benzodiazepine Group Ultra #134319 (96-well)/#134315 (480-well)

Compound	I-50 (ng/mL)	% Cross-reactivity
Oxazepam	6.3	100
Nordiazepam	3.5	179
Nimetazepam	4.0	159
Estazolam	4.1	154
Clobazam	4.3	146
Bromazepam	4.5	142
Diazepam	4.5	142
Etizolam	4.5	140
Pyrazolam	4.6	137
Clorazepate	4.8	132
Alphahydroxyalprazolam	4.8	132
Medazepam	4.9	129
Clonazolam	5.2	122
Flubromazepam	5.4	118
Nitrazepam	5.4	117
Triazolam	5.6	113
Alprazolam	5.7	112
Flualprazolam	5.7	112
Desalkylflurazepam	5.7	111
Lormetazepam	5.8	109
Flunitrazolam	5.9	107
Tetrazeepam	6.1	104
Diclazepam	6.2	103
2-Hydroxyethylflurazepam	6.3	101
Flurazepam	6.3	99
Lorazepam	6.4	99
Alphahydroxytriazolam	6.5	97
Temazepam	6.6	96
N-Desmethylflunitrazepam	6.8	93
Clonazepam	6.8	93
Flubromazolam	6.9	92
Flunitrazepam	7.0	90
Delorazepam	7.1	90
Cloniprazepam	7.7	82
7-Aminonitrazepam	8.5	75
Prazepam	9.0	70
7-Aminoflunitrazepam	9.1	70
Halazepam	9.3	69
Chlordiazepoxide	9.3	68
Midazolam	10.3	62
7-Aminoclonazepam	10.6	60
Phenazepam	12.0	53

Other drugs not listed include: Meclonazepam (30%), Nifoxipam (14%), Ketazolam (7%), Oxaprozin (2%), Nefopam (0.2%).

