

**Anti-K2/Spice, synthetic  
cannabinoids, IgG****Rabbit Polyclonal Antibody  
Catalog #1066 Lot P0709**

**LIMITATIONS:** THIS PRODUCT IS FOR RESEARCH USE ONLY AND IS NOT APPROVED FOR THERAPEUTIC OR DIAGNOSTIC USE.

**Background:**

The Tulip Biolabs, Inc. Anti-K2/Spice (synthetic cannabinoids), Cat. #1066, is a rabbit polyclonal IgG antibody. It has been used in a competitive ELISA format to test the presence of JWH-018, JWH-073, JWH-122, JWH-019, JWH-081, AM-2201 and related compounds and their metabolites in samples such as urine, whole blood, serum, and plasma (see Arntson *et al*, 2013). Note: If this antibody is used in an immunoassay to detect synthetic cannabinoids, suspect test samples must be confirmed using an alternative analytical method, for example LC-MS-MS.

**Immunogen:**

JWH-018 conjugated to a carrier protein.

**Supplied As:**

2 mg/ml of protein A purified rabbit IgG in phosphate buffered saline with 0.05% sodium azide preservative.

**Storage and Stability:**

Stable for 1 year from date of shipment when stored at -20 or -70°C. Stable for at least 1 month at 4°C. Avoid freeze/thaw cycles.

**Specificity and Comments:**

Recognizes the synthetic cannabinoids JWH-018, JWH-073, JWH-122, JWH-019, JWH-081, AM-2201 and related compounds and several of their metabolites (see attached Table and A. Arntson *et al.* (2013) *J. Analyt. Toxicol.* **37** 284).

**Applications and Suggested Dilutions:**

ELISA (for 96-well plate coating use 1-3µg/mL)

Note: This antibody is used in the Cat. #4300 K2/Spice ELISA kit.

Other methods not tested.

*Please note: This information is intended as a guide. The optimal concentrations must be determined by the user.*

**Tulip BioLabs Other Related Products:****Catalog #4300**

K2/Spice Synth Cannabinoids ELISA Kit.

**Catalog #1072**

Anti-JWH-250 (Spice/K2), IgG, rabbit polyclonal antibody.

**Catalog #1083**

Anti-UR144/XLR11 (Spice/K2), IgG, sheep polyclonal antibody.

**Original Reference:**

A. Arntson *et al.* (2013) *J. Analyt. Toxicol.* **37** 284

Note: This antibody was developed at Tulip Biolabs, Inc.

**Useful References:**

J.W. Huffman and D. Dai (1994) *Bioorg Med Chemistry* **4** 563

S. Dresen *et al.* (2010) *J Mass Spectrometry* **45** 760

M. Hutter *et al.* (2012) *J Mass Spectrometry* **47** 54

A. Wohlfarth *et al.* (2013) *Anal Chem* **85** 3730

**Cat. #1066 Anti-K2/Spice, Synthetic Cannabinoids Drug and Metabolite Cross-Reactivity Relative to JWH-018-5-OH (5 ng/mL)**

<b>COMPOUND</b>	<b>Cross-reactivity, %</b>
JWH-122-4-OH-pentyl metab	200
JWH-019-6-OH-hexyl metab	125
JWH-073-N-4-OH-butyl metab	125
JWH-081-O-desmethyl-4-OH-pentyl metab	125
<i>JWH-018-5-OH (calibrator)</i>	<i>100</i>
AM-2201-N-4-OH-pentyl metab	50
JWH-022-4-keto	50
JWH-073-N-3-OH-butyl metab	50
JWH-081-O-desmethyl-5-OH-pentyl metab	50
JWH-398-5-OH-pentyl metab	50
JWH-018-N-4-OH-pentyl metab	25
JWH-018-N-pentanoic acid	25
JWH-019-5-OH-hexyl metab	25
JWH-200	25
JWH-122-5-OH-pentyl metab	17
JWH-022-3-OH	10
JWH-398	10
AM-2201	10
JWH-073 N-butanoic acid metab	8
JWH-210-4-OH-pentyl metab	7
JWH-210-5-OH-pentyl metab	7
AM-1220	6
JWH-018 5-OH glucuronide	6
JWH-018	5
JWH-019	5
JWH-073	5
WIN 55,212-2	5

Note: Cross-reactivity was determined using Cat. #4300 K2/Spice Synth Cannabinoids ELISA Kit. For additional cross-reactivity data see A. Arntson *et al.* (2013) *J. Analyt. Toxicol.* **37** 284.