

21-Hydroxylase Autoantibody (21-OHAb)

ELISA

ADRENAL AUTOIMMUNITY

ASSAY CHARACTERISTICS

Qualitative

Calibration: Single-Point
Reference
Preparation

Controls (Included): 2 Positive, 1 Negative

TOTAL RUNNING TIME

17 hours and 40 minutes

SPECIMEN MATRIX

Human Serum

REFERENCE RANGE

Index Value < 45: Negative

Index Value ≥ 45: Positive

PRECISION

Intra-Assay Index Value	% Agreement in DX Calls	Inter-Assay Index Value	% Agreement in DX Calls
5.4	100	6.2	100
35.5	100	40.8	89
48.6	100	51.9	95
206.9	100	66.0	100

PATIENT GROUP	NUMBER OF PATIENTS POSITIVE FOR 21-OHAB	%
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Addison's Disease	18/23	78%
APS Type I	18/24	75%
APS Type II	58/61	95%
Graves' Disease	0/58	0%
Hashimoto's Thyroiditis	0/30	0%
Type 1 Diabetes	2/71	2.8%
POF (No AD or APSII)	0/3	0%
Post Tuberculosis Addison's Disease	0/5	0%
Healthy Blood Donors	2/1082	0.2%

CLINICAL SENSITIVITY & SPECIFICITY

Sensitivity	87%
Specificity	99%

ORDERING INFORMATION

KR7015 – 96 Well Kit

The KRONUS Steroid 21-Hydroxylase Autoantibody (21-OHAb) ELISA Kit is for the qualitative determination of antibodies to steroid 21-hydroxylase (21-OH) in human serum. The Steroid 21-Hydroxylase Autoantibody (21-OHAb) ELISA Kit is useful as an aid in the diagnosis of autoimmune adrenal disease, whether expressed as autoimmune Addison's disease (isolated) or Addison's disease as part of the more complex autoimmune polyglandular syndrome (APS), type I or II. The assay result is to be used in conjunction with other clinical and laboratory findings and is not a substitute for functional testing required to diagnose adrenal insufficiency.

Chronic primary adrenal insufficiency (Addison's disease) is most commonly caused by the insidious autoimmune destruction of the adrenal cortex and is characterized by the presence of adrenal cortex autoantibodies in the serum. It can occur sporadically, or in conjunction with other autoimmune endocrine diseases, which together, comprise type I and type II autoimmune polyglandular syndrome (APS).

The microsomal autoantigen steroid 21-hydroxylase (55 kilodalton) has been shown to be the primary autoantigen associated with autoimmune Addison's disease. 21-OHAb are markers of autoimmune Addison's disease, whether it presents alone, or as part of type I or type II autoimmune polyglandular syndrome. For this reason, the measurement of 21-OHAb is an important step in the investigation of adrenal insufficiency, and may also aid in the detection of those at risk of developing autoimmune adrenal failure in the future.



For In Vitro Diagnostic Use, Rx Only



ASSAY PROCEDURE

Sample Volume: 50 μ L per Well

Reference Preparation, Controls and Samples into Coated Wells: 50 μ L

Reaction Enhancer: 50 μ L
Add Reaction Enhancer to Each Well (except blanks)

Overnight Incubation at 2 – 8° C Wash Wells 3 Times

21-OH Biotin: 100 μ L
1 Hour Incubation with Shaking at Room Temperature Wash Wells 3 Times

Streptavidin-Peroxidase: 100 μ L
20 Minute Incubation with Shaking at Room Temperature Wash Wells 3 Times

TMB Substrate: 100 μ L
20 Minute Incubation in the Dark at Room Temperature

Stop Solution: 50 μ L
Read Absorbance

Total Assay Time is Approximately 17 Hours and 40 Minutes

REFERENCES

1. Oelkers, W., "Adrenal Insufficiency", The New England Journal of Medicine, Vol. 335, No.16, pp 1206-1212, 1996.
2. Song, Y-H, Conner, EL., Muir, A. et al., "Autoantibody Epitope Mapping of the 21- Hydroxylase Antigen in Autoimmune Addison's Disease", J Clin Endocrinol Metab, Vol. 78, No. 5, pp 1108-1112, 1994.
3. Winqvist O, Karlson, F.A., Kampe, O., "21- Hydroxylase is a major autoantigen involved in adult onset autoimmune Addison's disease" FEBS, Vol. 309, pp 51-55, 1992.
4. Furmaniak, J., Kominami, S., Asawa, T., Wedlock, N., Colls, J., Smith BR., "Autoimmune Addison's Disease-Evidence for a Role of Steroid 21-Hydroxylase Autoantibodies in Adrenal Insufficiency" J Clin Endocrinol Metab, Vol. 79, No. 5, pp 1108- 1112, 1994.
5. Falorni, A. et al, "High Diagnostic Accuracy for Idiopathic Addison's Disease with a Sensitive Radiobinding Assay for Autoantibodies Against Recombinant Human 21- Hydroxylase", J Clin Endocrinol Metab , Vol. 80, No. 9, pp 2752-2755, 1995.
6. Colls, J., Betterle, C., Volpato, M., Prentice, L., Smith, BR., Furmaniak, J., "Immunoprecipitation Assay for Autoantibodies to Steroid 21-Hydroxylase in Autoimmune Addison's Disease", Clin. Chem., Vol. 41, No. 3, pp 375-380, 1995.



...Your Source for Sensitive Autoimmune Diagnostics