Datasheet for ABIN415519

TSH ELISA Kit

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Overview

Quantity:	96 tests
Target:	TSH
Reactivity:	Mouse
Method Type:	Competition ELISA
Detection Range:	6.4 pg/mL - 4000 pg/mL
Minimum Detection Limit:	6.4 pg/mL
Application:	ELISA

Product Details

Purpose:	The kit is a competitive inhibition enzyme immunoassay technique for the in vitro quantitative measurement of TSH in mouse serum, plasma. We offer **validation data** (WB) **for the kit components**. So you can be sure to order a reliable ELISA kit product composed of high quality reagents.
Sample Type:	Plasma, Serum
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Specificity:	This assay has high sensitivity and excellent specificity for detection of Thyroid Stimulating Hormone (TSH). No significant cross-reactivity or interference between Thyroid Stimulating Hormone (TSH) and analogues was observed.

Product Details

Cross-Reactivity (Details):	No significant cross-reactivity or interference between Thyroid Stimulating Hormone (TSH) and analogues was observed.
Sensitivity:	2.2 pg/mL
Components:	• Pre-coated, ready to use 96-well strip plate, flat buttom • Plate sealer for 96 wells • Reference Standard • Standard Diluent • Detection Reagent A • Detection Reagent B • Assay Diluent A • Assay Diluent B • Reagent Diluent (if Detection Reagent is lyophilized) • TMB Substrate • Stop Solution • Wash Buffer (30 x concentrate) • Instruction manual

Target Details

Target:	TSH
Alternative Name:	TSH (TSH Products)
Target Type:	Hormone

Application Details

Application Notes:	• Limited by the current condition and scientific technology, we cannot completely conduct the comprehensive identification and analysis on the raw material provided by suppliers. So there might be some qualitative and technical risks to use the kit. • The final experimental results will be closely related to validity of the products, operation skills of the end users and the experimental environments. Please make sure that sufficient samples are available. • Kits from different batches may be a little different in detection range, sensitivity and color developing time. • Do not mix or substitute reagents from one kit lot to another. Use only the reagents supplied by manufacturer. • Protect all reagents from strong light during storage and incubation. All the bottle caps of reagents should be covered tightly to prevent the evaporation and contamination of microorganism. • There may be some foggy substance in the wells when the plate is opened at the first time. It will not have any effect on the final assay results. Do not remove microtiter plate from the

	storage bag until needed. • Wrong operations during the reagents preparation and loading, as well as incorrect parameter setting for the plate reader may lead to incorrect results. A microplate plate reader with a bandwidth of 10nm or less and an optical density range of 0-3 O.D. or greater at 450 ± 10nm wavelength is acceptable for use in absorbance measurement. Please read the instruction carefully and adjust the instrument prior to the experiment. • Even the same operator might get different results in two separate experiments. In order to get better reproducible results, the operation of every step in the assay should be controlled. Furthermore, a preliminary experiment before assay for each batch is recommended. • Each kit has been strictly passed Q.C test. However, results from end users might be inconsistent with our in-house data due to some unexpected transportation conditions or different lab equipments. Intra-assay variance among kits from different batches might arise from above factors, too. • Kits from different manufacturers for the same item might produce different results, since we have not compared our products with other manufacturers.
Comment:	Information on standard material: The standard might be recombinant protein or natural protein, that will depend on the specific kit. Moreover, the expression system is E.coli or yeast or mammal cell. There is 0.05% proclin 300 in the standard as preservative. Information on reagents: The stop solution used in the kit is sulfuric acid with concentration of 1 mol/L. And the wash solution is TBS. The standard diluent contains 0.02 % sodium azide, assay diluent A and assay diluent B contain 0.01% sodium azide. Some kits can contain is BSA in them. Information on antibodies: The provided antibodies and their host vary in different kits.
Sample Volume:	50 µL
Assay Time:	2 h
Plate:	Pre-coated
Protocol:	1. Prepare all reagents, samples and standards, 2. Add 50µL standard or sample to each well. Then add 50µL prepared Detection Reagent A immediately. Shake and mix. Incubate 1 hour at 37 °C, 3. Aspirate and wash 3 times, 4. Add 100µL prepared Detection Reagent B. Incubate 30 minutes at 37 °C, 5. Aspirate and wash 5 times,

6. Add 90μL Substrate Solution. Incubate 10-20 minutes at 37 °C,
7. Add 50μL Stop Solution. Read at 450 nm immediately.

Reagent Preparation:

1. Bring all kit components and samples to room temperature (18-25 °C) before use. If the kit will not be used up in one time, please only take out strips and reagents for present experiment, and leave the remaining strips and reagents in required condition.
2. Standard - Reconstitute the Standard with 0.4 mL of Standard Diluent, kept for 10 minutes at room temperature, shake gently(not to foam). The concentration of the standard in the stock solution is 4,000pg/mL. Please prepare 5 tubes containing 0.4 mL Standard Diluent and produce a quintuple dilution series according to the picture shown below. Mix each tube thoroughly before the next transfer. Set up 5 points of diluted standard such as 4,000pg/mL, 800pg/mL, 160pg/mL, 32pg/mL, 6.4pg/mL, and the last EP tubes with Standard Diluent is the blank as 0pg/mL.
3. Detection Reagent A and Detection Reagent B - If lyophilized reconstitute the Detection Reagent A with 150μL of Reagent Diluent, kept for 10 minutes at room temperature, shake gently (not to foam). Briefly spin or centrifuge the stock Detection A and Detection B before use. Dilute them to the working concentration 100-fold with Assay Diluent A and B, respectively.
4. Wash Solution - Dilute 20 mL of Wash Solution concentrate (30x) with 580 mL of deionized or distilled water to prepare 600 mL of Wash Solution (1x).
5. TMB substrate - Aspirate the needed dosage of the solution with sterilized tips and do not dump the residual solution into the vial again.

Note:

1. The standard for this kit is liquid. Due to its small volume, maybe invisible to the eye.
2. Making serial dilution in the wells directly is not permitted.
3. Prepare standard within 15 minutes before assay. Please do not dissolve the reagents at 37 °C directly.
4. Detection Reagent A and B are sticky solutions, therefore, slowly pipette them to reduce the volume errors.
5. Please carefully reconstitute Standards or working Detection Reagent A and B according to the instruction, and avoid foaming and mix gently until the crystals are completely dissolved. To minimize imprecision caused by pipetting, use small volumes and ensure that pipettors are calibrated. It is recommended to suck more than 10μL for one pipetting.
6. The reconstituted Standards, Detection Reagent A and Detection Reagent B can be used only once.
7. If crystals have formed in the Wash Solution concentrate (30x), warm to room temperature and mix gently until the crystals are completely dissolved.
8. Contaminated water or container for reagent preparation will influence the detection result.

Assay Precision:

Intra-assay Precision (Precision within an assay): 3 samples with low, middle and high level Thyroid Stimulating Hormone (TSH) were tested 20 times on one plate, respectively.

Inter-assay Precision (Precision between assays): 3 samples with low, middle and high level

Application Details

	Thyroid Stimulating Hormone (TSH) were tested on 3 different plates, 8 replicates in each plate. CV(%) = SD/meanX100 Intra-Assay: CV<10% Inter-Assay: CV<12%
Restrictions:	For Research Use only

Handling

Precaution of Use:	The Stop Solution suggested for use with this kit is an acid solution. Wear eye, hand, face, and clothing protection when using this material.
Handling Advice:	The stability of kit is determined by the loss rate of activity. The loss rate of this kit is less than 5 % within the expiration date under appropriate storage condition. To minimize extra influence on the performance, operation procedures and lab conditions, especially room temperature, air humidity, incubator temperature should be strictly controlled. It is also strongly suggested that the whole assay is performed by the same operator from the beginning to the end.
Storage:	4 °C
Storage Comment:	• For unopened kit: All the reagents should be kept according to the labels on vials. The Standard, Detection Reagent A, Detection Reagent B and the 96-well strip plate should be stored at -20°C upon receipt while the others should be at 4°C. • For opened kit: When the kit is opened, the remaining reagents still need to be stored according to the above storage condition. Besides, please return the unused wells to the foil pouch containing the desiccant pack, and reseal along entire edge of zip-seal. Note: It is highly recommended to use the remaining reagents within 1 month provided this is within the expiration date of the kit. • For ELISA kit, 1 day storage at 37°C can be considered as 2 months at 4°C, which means 3 days at 37°C equaling 6 months at 4°C.
Expiry Date:	6 months

Publications

Product cited in:	Iliemene, Atawodi: "Preventive potential of dietary inclusion of Brachystegia eurycoma (Harms) seeds on N-methyl-N-nitrosourea-induced colon carcinogenesis in Wistar rats." in: **Journal of ethnopharmacology**, Vol. 238, pp. 111858, (2020) (PubMed). Rehman, Rashid, Arafah, Qamar, Alsaffar, Ahmad, Almatroudi, Alqahtani, Rashid, Ahmad: " Piperine Regulates Nrf-2/Keap-1 Signalling and Exhibits Anticancer Effect in Experimental Colon

Carcinogenesis in Wistar Rats." in: **Biology**, Vol. 9, Issue 9, (2020) (PubMed).

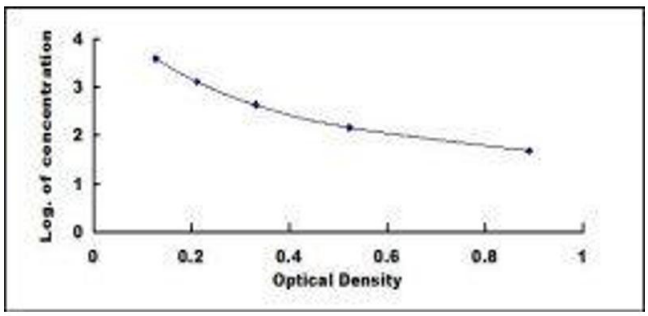
Bathaie, Miri, Mohagheghi, Mokhtari-Dizaji, Shahbazfar, Hasanzadeh: "Saffron Aqueous Extract Inhibits the Chemically-induced Gastric Cancer Progression in the Wistar Albino Rat." in: **Iranian journal of basic medical sciences**, Vol. 16, Issue 1, pp. 27-38, (2013) (PubMed).

Mansour, Al-Ismaeel, Al-Rikabi, Al-Shabanah: "Comparison of angiotensin converting enzyme inhibitors and angiotensin II type 1 receptor blockade for the prevention of premalignant changes in the liver." in: **Life sciences**, Vol. 89, Issue 5-6, pp. 188-94, (2011) (PubMed).

Mansour, Bekheet, Al-Rejaie, Al-Shabanah, Al-Howiriny, Al-Rikabi, Abdo: "Ginger ingredients inhibit the development of diethylnitrosoamine induced premalignant phenotype in rat chemical hepatocarcinogenesis model." in: **BioFactors (Oxford, England)**, Vol. 36, Issue 6, pp. 483-90, (2010) (PubMed).

There are more publications referencing this product on: Product page

Validation report #029833 for ELISA (ELISA)



ELISA

Image 1.

Validation report #100110 for ELISA (ELISA)

Successfully validated (ELISA (ELISA))

by Zentrum fuer Augenheilkunde, Unversitätsklinikum Essen, Universität Duisburg-Essen

Report Number: 100110

Date: Jun 14 2017

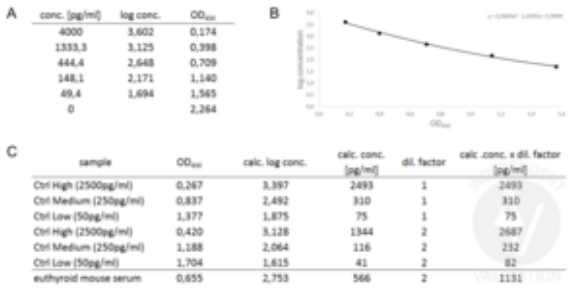
Target:	mTSH
Lot Number:	L170428173
Method validated:	ELISA (ELISA)
Positive Control:	euthyroid mouse serum low (50pg/ml), medium (250pg/ml), and high (2500pg/ml) mTSH concentration reference standards (Cloud Clone) undiluted or diluted 1:2 in Standard Diluent
Negative Control:	Blank samples Standard Diluent only
Notes:	Passed, the murine TSH ELISA kit ABIN415519 specifically detects the antigen in euthyroid mouse serum.
Standard Curve:	4000pg/ml, 1333pg/ml, 444pg/ml, 148pg/ml, 49pg/ml diluted from the kit stock solution in Standard Diluent
Protocol:	• Bring all reagents and samples to room temperature before use. • Prepare the standards as described in the kit manual. It is very important to allow the stock to sit for 10min and the prepared standards for 15min at RT. • Pipette 50µl of the diluted kits standard, blank, and the sample to each well diluted as indicated above. • Add immediately 50µl Detection Reagent A diluted 1:100in Assay Diluent A to each well. • Seal plate with an adhesive strip and mix the plate gently and let it incubate for 1h at 37°C. • Remove the solution and wash the wells 4x for 1min with 350µl Wash Solution diluted to 1x in distilled H_2O. • After the last washing step, remove the remaining liquid by inverting and blotting the plate against absorbent paper. • Add 100µl Detection Reagent B diluted 1:100 in Assay Diluent B to each well. • Seal plate with an adhesive strip and let the plate incubate for 30min at 37°C. • Remove the solution and wash 5x for 1min 350µl Wash Solution diluted to 1x in distilled H_2O. • Add 90µl TMB Substrate. • Seal plate with an adhesive strip and incubate the plate for 15min at 37°C. • Add 50µl Stop Solution, mix the plate gently and measure immediately the absorbance at 450nm.

Validation report #100110 for ELISA (ELISA)

Experimental Notes:

- The Assay is very sensitive. Therefore it is very important to check all reagents before use. Do not use any reagents that appear cloudy.
- In addition to that it is necessary to store the kit under the recommended conditions. If the entire kit is used at once, it is necessary aliquot the reagents and take out only the strips for the present assay.
- All diluted reagents have to be mixed very gently.

Image for Validation report #100110


A

conc. [pg/ml]	log conc.	OD_{450}
4000	3,602	0,174
1333,3	3,125	0,398
444,4	2,648	0,709
148,1	2,171	1,140
49,4	1,694	1,565
0		2,264

B

C

sample	OD_{450}	calc. log conc.	calc. conc. [pg/ml]	dil. factor	calc .conc. x dil. factor [pg/ml]
Ctrl High (2500pg/ml)	0,267	3,397	2493	1	2493
Ctrl Medium (250pg/ml)	0,837	2,492	310	1	310
Ctrl Low (50pg/ml)	1,377	1,875	75	1	75
Ctrl High (2500pg/ml)	0,420	3,128	1344	2	2687
Ctrl Medium (250pg/ml)	1,188	2,064	116	2	232
Ctrl Low (50pg/ml)	1,704	1,615	41	2	82
euthyroid mouse serum	0,655	2,753	566	2	1131

Validation image no. 1 for Thyroid Stimulating Hormone (TSH) ELISA Kit (ABIN415519)

A. Standard curve for ABIN415519, generated from one measurement of the absorbance of the kit standard diluted as described in the protocol section at 450nm. B. Plotted standard curve. C. Measurement of absorbance values at 450nm and calculated concentration of the tested samples.