24(S)-Hydroxycholesterol ELISA kit

Only quantitative 24(S)-hydroxycholesterol ELISA kit available for neurodegenerative research.

The 24(S)-Hydroxycholesterol ELISA kit is a complete, colorimetric, competitive immunoassay kit for the quantitative determination of 24(S)-Hydroxycholesterol in tissue culture media (culture supernatant), cerebral spinal fluid and tissue homogenate samples with results in just 2 hours.

The homeostasis and trafficking of cholesterol is an essential component of both the central and peripheral nervous system in the maintenance of neuronal tissues, and disturbances in this homeostasis may be due to the onset of various neurological diseases such as Alzheimer's Disease, Huntington's Disease and multiple sclerosis. Apolipoprotein E and Cyp46 (also known as 24S-Cholesterol Hydroxylase) are both important in the homeostasis of cerebral cholesterol and thus are of clinical interest in understanding the relation of these molecules with the pathogenesis of these neurodegenerative diseases.

24-OHC, an enzymatically-generated side chain-hydroxylated derivative of cholesterol, is a pivotal marker in the study of cerebral cholesterol homeostasis. Cholesterol is unable to cross the blood-brain barrier however, Cyp46 enzyme converts cholesterol to the more soluble 24-OHC, and this hydroxylated form of cholesterol is able to cross the blood-brain barrier. This conversion allows for the reduction of cholesterol in the brain and the efflux of 24-OHC from the brain into cerebral spinal fluid and blood. The flux of 24-OHC has been seen in patients with a variety of neurodegenerative diseases. In the instance of Alzheimer's disease, the change in 24S-hydroxycholesterol concentrations may be indicative of different pathogenetic mechanisms and/or the progression of the disease. As in the case of multiple sclerosis, concentrations of 24-OHC have been shown to decrease, likely due to the loss of neuronal cells responsible for the synthesis.

Citations: 11 View Online »

- Convenient – user-friendly alternative to mass spectrometry
- Sensitive – measure as little as 0.78 ng/ml of 24(S)-hydroxycholesterol
- Time Saving – results from up to 36 samples in duplicate in just 2 hours
- Specific – low cross-reactivity with structurally related molecules
- Easy-to-use – liquid color-coded reagents reduce errors

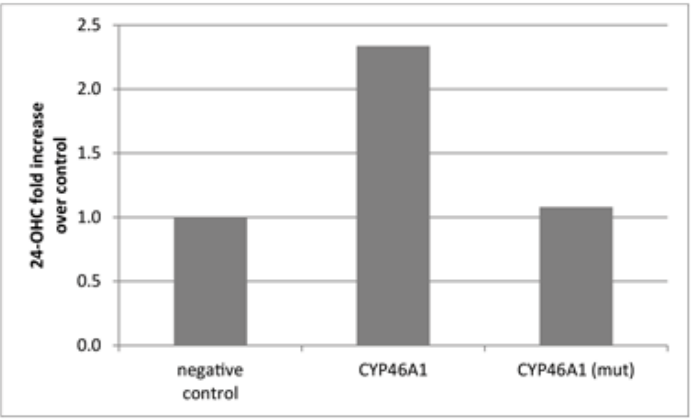
Ordering Information

Order Online »

ADI-900-210-0001	96 wells

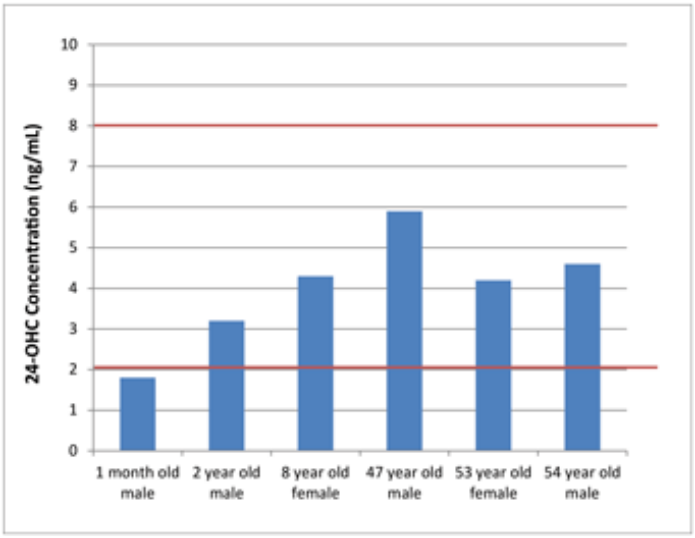
Manuals, SDS & CofA

View Online »

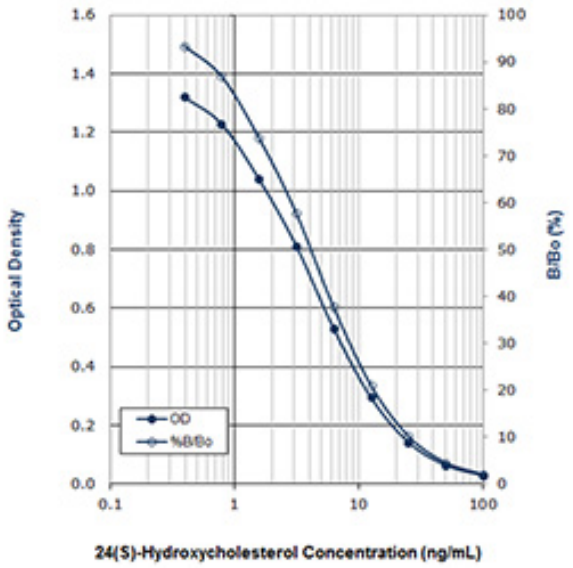


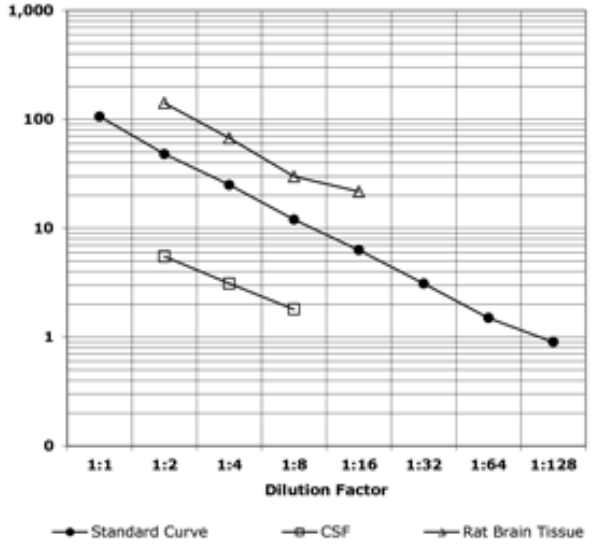
Download our Application Note: A Competitive, Colorimetric ELISA for Quantification of 24(S)-Hydroxycholesterol, a Biomarker for Neurodegeneration

“”,24(S)-Hydroxycholesterol ELISA kit 24-OHC-fold-increase,24(S)-Hydroxycholesterol ELISA kit 24-OHC-fold-increase,yes
ADI-900-210,ADI-900-210-parallelism.gif,http://static.enzolifesciences.com/fileadmin/files/image/ADI-900-210-parallelism.gif,,24(S)-Hydroxycholesterol ELISA kit Parallelism curve,24(S)-Hydroxycholesterol ELISA kit Parallelism curve,yes
ADI-900-210,ADI-900-210_std_curve.jpg,http://static.enzolifesciences.com/fileadmin/files/image/ADI-900-210_std_curve.jpg,,24(S)-Hydroxycholesterol ELISA kit Standard curve,24(S)-Hydroxycholesterol ELISA kit Standard curve,yes
ADI-900-210,ADI-900-210-experiment_eval.gif,http://static.enzolifesciences.com/fileadmin/files/image/ADI-900-210-experiment_eval.gif,Detect normal levels of 24(S)-hydroxycholesterol. Normal human cerebral spinal fluid samples were diluted 1:2 in assay buffer and analyzed in the assay for 24(S)-Hydroxycholesterol levels. The blue bars represent the levels of 24(S)-Hydroxycholesterol in each sample as determined by ELISA. The dashed lines represent the maximum and minimum of the range of endogenous CSF 24(S)-Hydroxycholesterol levels as reported in the literature (Annu. Rev. Biochem. 2009.78:1017-1040.),24(S)-Hydroxycholesterol ELISA kit experiment_eval,24(S)-Hydroxycholesterol ELISA kit experiment_eval,yes
ADI-900-212,ADI-900-212_ELISA-WB_01.jpg,http://static.enzolifesciences.com/fileadmin/files/image/ADI-900-212_ELISA-WB_01.jpg,Correlation of p62 (Prod. No. ADI-900-212) and NBR1 (Prod. No. ADI-900-211) immunoassays to autophagy induction. MDA-MB-231 human breast cancer cells were treated with 2μM of withaferin A (WA)



Detect normal levels of 24(S)-hydroxycholesterol. Normal human cerebral spinal fluid samples were diluted 1:2 in assay buffer and analyzed in the assay for 24(S)-Hydroxycholesterol levels. The blue bars represent the levels of 24(S)-Hydroxycholesterol in each sample as determined by ELISA. The dashed lines represent the maximum and minimum of the range of endogenous CSF 24(S)-Hydroxycholesterol levels as reported in the literature (Annu. Rev. Biochem. 2009.78:1017-1040.)


Optical Density
B:Bo (%)
OD
%B/Bo
24(S)-Hydroxycholesterol Concentration (ng/mL)


1:1
1:2
1:4
1:8
1:16
1:32
1:64
1:128
Dilution Factor
Standard Curve
CSF
Rat Brain Tissue

Handling & Storage

Use/Stability	All kit components should be stored at 4ºC.
Long Term Storage	+4°C
Shipping	Blue Ice

Regulatory Status

RUO - Research Use Only

Product Details

Application	Colorimetric detection, ELISA
Application Notes	For the quantitative determination of species independent 24(S)-Hydroxycholesterol in cerebral spinal fluid, culture supernatants and tissue samples.
Assay Time	2 hours
Compatibility	This product is compatible with the **Absorbance 96 Plate Reader**.
Contents	Microtiter Plate, Conjugate, Antibody, Assay Buffer, Wash Buffer Concentrate, Standard, TMB Substrate, Stop Solution 2, Streptavidin-HRP
Sensitivity	0.78 ng/ml (range 0.39-100ng/ml)
Species Reactivity	Species independent
Wavelength	450 nm

Last modified: May 29, 2024

ENZO LIFE SCIENCES, INC.
Phone: 800.942.0430
info-usa@enzolifesciences.com

European Sales Office
ENZO LIFE SCIENCES (ELS) AG
Phone: +41 61 926 8989
info-eu@enzolifesciences.com

Belgium, The Netherlands & Luxembourg
Phone: +32 3 466 0420
info-be@enzolifesciences.com

France
Phone: +33 472 440 655
info-fr@enzolifesciences.com

Germany
Phone: +49 7621 5500 526
info-de@enzolifesciences.com

UK & Ireland
Phone (UK customers): 0845 601 1488
Phone: +44 1392 825900
info-uk@enzolifesciences.com

For local distributors and detailed product information visit us online: enzo.com All product names, logos, and brands are the property of their respective owners.