

Rat Vitamin A (VA) ELISA Kit | VA elisa kit

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CATALOG #
AAA330153

REACTIVITY
Rat

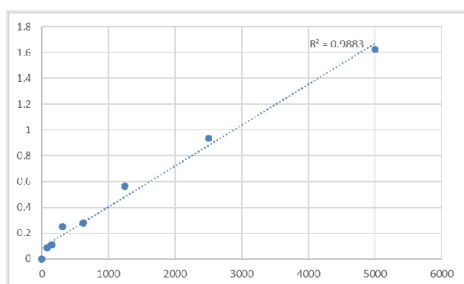
PRODUCT SYNONYMS

Vitamin A (VA); Rat Vitamin A (VA) ELISA Kit; VA elisa kit

PRODUCT SPECIFICATIONS

Reactivity	Rat
Specificity	Rat Vitamin A (VA) ELISA Kit has high sensitivity and excellent specificity for detection of Rat VA. No significant cross-reactivity or interference between Rat VA and analogues was observed.
Assay Type	Sandwich ELISA (Quantitative)
Samples	Cell Culture Supernatants, Serum, Plasma, Other Biological Fluids
Detection Method	Colorimetric
Usage Notes	* Do not mix components from different kit lots or use reagents beyond the kit expiration date. * Allow all reagents to warm to room temperature for at least 30 minutes before opening. * Pre-rinse the pipet tip with reagent, use fresh pipet tips for each sample, standard and reagent to avoid contamination. * Unused wells must be kept desiccated at 4 degree C in the sealed bag provided. * Mix Thoroughly is very important for the result. It is recommended using low frequency oscillator or slight hand shaking every 10 minutes. * It is recommended that all samples and standards be assayed in duplicate or triplicate.
Preparation and Storage	Store at 2-8 degree C.

IMAGES



Standard Curve (Sample)

Fig.1. Rat Vitamin A (VA) Standard Curve.

ADDITIONAL INFORMATION

Related Product Information for VA elisa kit

Description: This Rat Vitamin A (VA) ELISA Kit employs a two-site sandwich ELISA to quantitate VA in samples. An antibody specific for VA has been pre-coated onto a microplate. Standards and samples are pipetted into the wells and any VA present is bound by the immobilized antibody. After removing any unbound substances, a biotin-conjugated antibody specific for VA is added to the wells. After washing, Streptavidin conjugated Horseradish Peroxidase (HRP) is added to the wells. Following a wash to remove any unbound avidin-enzyme reagent, a substrate solution is added to the wells and color develops in proportion to the amount of VA bound in the initial step. The color development is stopped and the intensity of the color is measured.

Background: Vitamin A is a group of unsaturated nutritional organic compounds that includes retinol, retinal, retinoic acid, and several provitamin A carotenoids (most notably beta-carotene). Vitamin A has multiple functions: it is important for growth and development, for the maintenance of the immune system and good vision. Vitamin A is needed by the retina of the eye in the form of retinal, which combines with protein opsin to form rhodopsin, the light-absorbing molecule necessary for both low-light (scotopic vision) and color vision. Vitamin A also functions in a very different role as retinoic acid (an irreversibly oxidized form of retinol), which is an important hormone-like growth factor for epithelial and other cells. In foods of animal origin, the major form of vitamin A is an ester, primarily retinyl palmitate, which is converted to retinol (chemically an alcohol) in the small intestine. The retinol form functions as a storage form of the vitamin, and can be converted to and from its visually active aldehyde form, retinal. All forms of vitamin A have a beta-ionone ring to which an isoprenoid chain is attached, called a retinyl group. Both structural features are essential for vitamin activity. The orange pigment of carrots (beta-carotene) can be represented as two connected retinyl groups, which are used in the body to contribute to vitamin A levels. Alpha-carotene and gamma-carotene also have a single retinyl group, which give them some vitamin activity. None of the other carotenes have vitamin activity. The carotenoid beta-cryptoxanthin possesses an ionone group and has vitamin activity in humans. Vitamin A can be found in two principal forms in foods: Retinol, the form of vitamin A absorbed when eating animal food sources, is a yellow, fat-soluble substance. Since the pure alcohol form is unstable, the vitamin is found in tissues in a form of retinyl ester. It is also commercially produced and administered as esters such as retinyl acetate or palmitate. The carotenes alpha-carotene, beta-carotene, gamma-carotene; and the xanthophyll beta-cryptoxanthin (all of which contain beta-ionone rings), but no other carotenoids, function as provitamin A in herbivores and omnivore animals, which possess the enzyme beta-carotene 15,15'-dioxygenase which cleaves beta-carotene in the intestinal mucosa and converts it to retinol.[9] In general, carnivores are poor converters of ionone-containing carotenoids, and pure carnivores such as cats and ferrets lack beta-carotene 15,15'-dioxygenase and cannot convert any carotenoids to retinal (resulting in none of the carotenoids being forms of vitamin A for these species).

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://www.aaabiotech.com/rat-elisa-kits/vitamin-a-va/330153>