

## Human transient receptor potential cation channel subfamily V; member 1 (TRPV1) ELISA kit (0.5-10 ng/mL)

|                        |                                |
|------------------------|--------------------------------|
| <b>Cat. No.:</b>       | 0126WXX-2008                   |
| <b>Assay Type:</b>     | Quantitative competitive ELISA |
| <b>Target Species:</b> | Human                          |
| <b>Assay Target:</b>   | TRPV1                          |
| <b>Size:</b>           | 48T; 96T                       |

This product is for research use only and is not intended for diagnostic use.

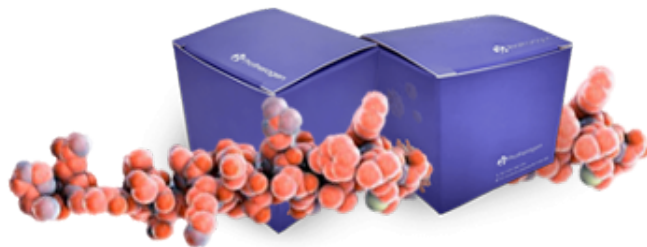
### Product Overview

#### Description

Human transient receptor potential cation channel subfamily V; member 1 (TRPV1) ELISA kit (0.5-10 ng/mL) is an ELISA-based *in vitro* research tool designed specifically for the quantitative detection of TRPV1 in human samples with a range of 0.5-10 ng/mL and a minimum detectable dose (sensitivity) of 0.1 ng/mL. The kit is highly sensitive and easy to use.

#### Assay Principle

The TRPV1 ELISA kit employs a competitive enzyme immunoassay technique featuring a monoclonal anti-TRPV1 antibody and a TRPV1-HRP conjugate. The test sample and buffer are incubated alongside the TRPV1-HRP conjugate in a pre-sensitized plate for sixty minutes. Because the specific binding sites on the monoclonal antibody are limited, the TRPV1 present in the sample competes with the TRPV1-HRP conjugate for these positions. After five wash cycles, an HRP substrate is added to develop a blue product that shifts to yellow after the reaction is halted with an acidic stop solution. The signal intensity, recorded spectrophotometrically at 450 nm, is inversely proportional to the TRPV1 concentration. Final concentrations for each specimen are determined by interpolating the O.D. values against a standard calibration curve.

**Background**

Transient receptor potential cation channel subfamily V member 1 (TRPV1) is a non-selective cation channel and receptor for capsaicin, functioning as a transducer of thermal and chemical stimuli in sensory neurons. By mediating calcium influx and downstream signaling, TRPV1 influences energy metabolism, thermogenesis, and appetite regulation. Altered TRPV1 activity has been associated with changes in metabolic rate and energy balance, linking it to obesity and related metabolic disorders.

**Synonyms**

Vanilloid receptor subtype 1; Capsaicin receptor; Osm-9-like TRP channel 1; Vanilloid receptor 1; VR1; OTRPC1

**Formula Weight**

94,956 Da

**Applications**

Human transient receptor potential cation channel subfamily V, member 1 (TRPV1) ELISA kit (0.5-10 ng/mL) is used to quantify TRPV1 in serum, plasma, cell culture supernatants, body fluid, tissue homogenate of human, providing data to support research in a wide range of areas, including signal transduction, obesity, and others.

**Research Area**

Signal transduction; Obesity

## Specification

**Sample Type**

Serum; Plasma; Cell culture supernatants; Body fluid; Tissue homogenate

**Detection Range**

0.5-10 ng/mL

**Sensitivity**

0.1 ng/mL

**Cross-reactivity**

No significant cross-reactivity or interference was observed.

**Recovery**

94-103%

**Storage**

Store at 2-8°C.