Recent work has begun to clarify the function of ionotropic receptors, which are expressed in sensory neurons and promote nociception. The most representative receptors of this class belong to TRP ion channel superfamily comprised by seven sub-families; TRPC, TRPV, TRPP, TRPM, TRPN, TRPML and TRPA.

TRPV1 channels have six transmembrane domains that most probably assemble into tetramers to form non-selective cationic channels. The first cloned TRPV receptor was TRPV1. This receptor is activated by capsaicin, protons or heat (with a threshold > ~43°C), all of which cause pain *in vivo*. The recent researches on nociception and stimulus conduction systems have focused on TRPV1.

Such research indicates that TRPV1 activity is regulated by protein phosphorylation and dephosphorylation, and plays key roles in the mechanism of acute inflammatory nociception.

TRPV1 activity is enhanced by PKC activity induced by the inflammatory mediators adenosine triphosphate (ATP), bradykinin(BK), prostaglandins(PGx) through G protein-coupled receptors.

TRPV1 has two phosphorylation sites for PKC-mediated phosphorylation: S502 and S800 (Ref. 1).

The antibody presented here reacts with phosphorylated TRPV1 at S800. PKCe was identified as the target of S800 phosphorylation and there is evidence to support the *in vivo* phosphoryation of S800 in mouse and rat DRG neurons by PKCe (Ref. 2). This antibody will be useful to elucidate the nocifensive response to pain in vivo, and the molecular mechanism for sensitization-desensitization.

**Thermosensitive TRP Channel**

**Anti Rat phospho TRPV1 (VR-1) Polyclonal Antibody**

**Package Size**
25µg (100µL/vial)

**Format**
Rabbit polyclonal antibody 0.25mg/mL

**Buffer**
PBS [containing 2% Block Ace as a stabilizer, 0.1%Proclin as a bacteriostat]

**Storage**
Store below -20°C. Once thawed, store at 4°C. Repeated freeze-thaw cycles should be avoided.

**Purification method**
This antibody was established from the serum of a rabbit immunized with the partial peptide representing phosphorylated TRPV1 at S800, and purified by peptide affinity chromatography.

**Working dilution**
For Western blotting: 0.5µg/ml

**Western blotting**
Sample: phosphorylated TRPV1 at S800 in HEK293 cells

Preparation of antibodies and instruction
Dr. Makoto Tominaga at Section of Cell Signaling, Okazaki Institute for Integrative Bioscience, National Institutes of Natural Sciences
【Reference】


* : Application Reference

Manufacturer

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