

## Product datasheet for **TA328744**

### TRPA1 Rabbit Polyclonal Antibody

#### Product data:

Product Type:	Primary Antibodies
Applications:	IF, IHC, IP, WB
Recommended Dilution:	WB: 1:200-1:2000; IHC: 1:100-1:3000
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Peptide (C)NSTGIINETSDHSE, corresponding to amino acid residues 747-760 of human TRPA1. 1st extracellular loop.
Formulation:	Lyophilized. Concentration before lyophilization ~0.8mg/ml (lot dependent, please refer to CoA along with shipment for actual concentration). Buffer before lyophilization: phosphate buffered saline (PBS), pH 7.4, 1% BSA, 0.05% NaN <sub>3</sub> .
Reconstitution Method:	Add 50 ul double distilled water (DDW) to the lyophilized powder.
Purification:	Affinity purified on immobilized antigen.
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	transient receptor potential cation channel subfamily A member 1
Database Link:	<a href="#">NP_015628</a> <a href="#">Entrez Gene 277328 Mouse</a> <a href="#">Entrez Gene 312896 Rat</a> <a href="#">Entrez Gene 8989 Human</a> <a href="#">O75762</a>



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**Background:**

The TRPA family is comprised of only one mammalian member, the TRPA1 (formerly named ANKTM1). TRPA1 is expressed in peripheral sensory neurons, where it is suggested to contribute to the detection of painful stimuli. Originally it was thought that TRPA channels sensed painfully cold temperatures, but a more conservative description is that TRPA1 is sensitive to membrane/cytoskeletal perturbations by cold and perhaps stretch. In addition, it is sensitive to pungent natural compounds present in cinnamon oil, mustard oil, and wintergreen oil. TRPA1 is also expressed in hair cells, where its role in sensing mechanical forces is still unclear and controversial. TRPA1 has similar structure as all TRP ion channel members, six transmembrane domains, intracellular N- and C-terminus. However, its N-terminus domain possesses 17 ankyrin repeats that might indicate its potential role as a mechanosensor. TRPA1 is expressed in nociceptive neurons expressing TRPV1 as well and might serve as a marker for poly-modal nociceptors.

**Synonyms:**

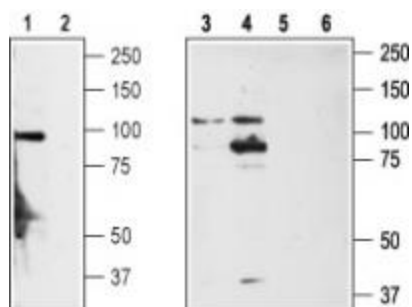
ANKTM1; FEPS

**Note:**

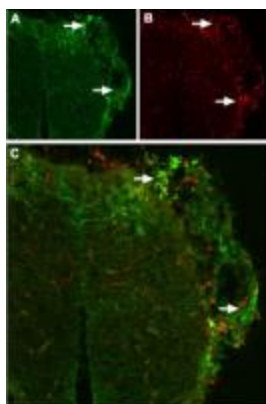
This antibody was tested in live cell imaging. Please see IF/ICC data for detail.

**Protein Families:**

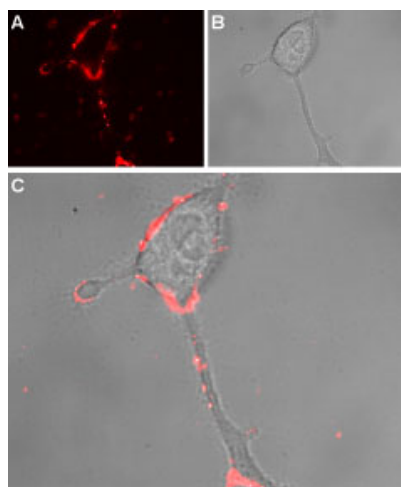
Druggable Genome, Ion Channels: Transient receptor potential, Transmembrane

**Product images:**

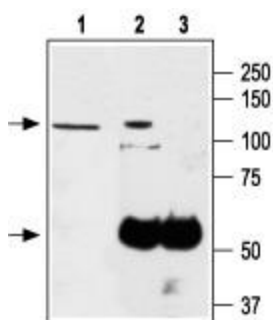
Western blot analysis of rat DRG (lanes 1, 2), non-differentiated PC12 cells (lanes 3, 5) and differentiated PC12 cells (lanes 4, 6) lysates: 1, 3, 4. Anti-TRPA1 (extracellular) antibody, (1:200). 2, 5, 6. Anti-TRPA1 (extracellular) antibody, preincubated with the control peptide antigen.



Expression of TRPA1 in mouse DRG. Immunohistochemical staining of mouse dorsal root ganglion (DRG) frozen sections using Anti-TRPA1 (extracellular) antibody. A. TRPA1 (green) was distributed in patches (arrows). B. Neurons containing neurofilament 200 (red) also were distributed in patches. C. Confocal merge of TRPA1 and neurofilament 200 demonstrate partial overlap of these patches (arrows).



Expression of TRPA1 in rat PC12 cells. Immunocytochemical staining of intact living rat PC12 cells. A. Extracellular staining of cells using Anti-TRPA1 (extracellular) antibody, (1:50) followed by goat anti-rabbit-AlexaFluor-594 secondary antibody (red). B. Live view of the cells. C. Merged image of A and B.



Immunoprecipitation of PC-12 lysates: 1. PC-12 lysates. 2. PC-12 lysates + Anti-TRPA1 (extracellular) antibody (6.5 ug) + protein A beads. 3. Anti-TRPA1 (extracellular) antibody + protein A beads.