

Product datasheet for **TA329064**

Trhr Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	IF, WB
Recommended Dilution:	WB: 1:200-1:2000; FC: 1:50-1:600
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Peptide CKQKPTEKAANYS, corresponding to amino acid residues 337-349 of rat Thyrotropin-releasing hormone receptor 1 (Accession Q01717). Intracellular, C-terminus.
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 ₃ .
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:	thyrotropin releasing hormone receptor
Database Link:	NP_037179 Entrez Gene 7201 Human Entrez Gene 22045 Mouse Entrez Gene 25570 Rat Q01717



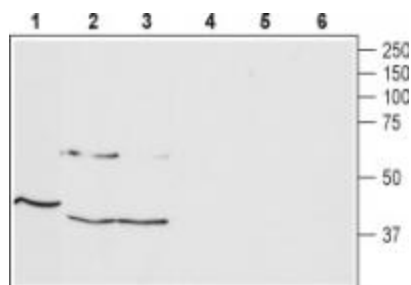
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Background:

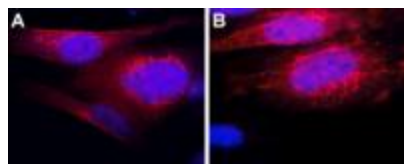
Thyrotropin-releasing hormone (TRH), is a widely distributed tripeptide which acts as a hormone, a paracrine regulatory factor and a neurotransmitter/neuromodulator; it is expressed in many parts of the brain as well as in various peripheral tissues. In the hypothalamus, TRH is secreted from the paraventricular nucleus (VPN) by TRH neurons prior to a post-translational processing from its precursor, pro-TRH. A key player in the regulation of the hypothalamus-pituitary-thyroid (HPT) axis, TRH is released into the hypophyseal portal circulation of the median eminence and reaches the pituitary, where it binds to TRH receptors, thereby stimulates the secretion of thyrotropin (thyroid-stimulating hormone; TSH). TSH, in turn, affects the thyroid to produce T4 which is subsequently converted into its biologically-active analog, T3 - a negative mediator of TRH. In the tanycytes, ependymal cells of glial origin located in close proximity to the VPN, T4 is converted to T3 by the enzyme deiodinase II (dio2) - a counterpart to deiodinase III (dio3) which conversely inactivates the above mentioned thyroid hormones, thus so indirectly promotes the production of TRHs. TRH receptor 1 (TRH-R1), the only identified TRH receptor in humans, is a G protein-coupled receptor (GPCR) abundant in the anterior pituitary, neuroendocrine system, autonomic nervous system and the visceral regions of the brain. Like all members of GPCRs, TRH receptor has seven transmembrane domains, and extracellular N-terminus and an intracellular C-terminal tail. TRH receptor couples Gq upon activation which in turn leads to the activation of phospholipase C. From a behavioral aspect, it was shown that TRH-coupled TRH-R1 increases cognitive arousal by directly exciting the sleep/wake system in the lateral hypothalamic area, and inhibits seizure activity in the hippocampus by facilitating GABA release, whereas its deficiency, as observed in mutant model mice, is linked to growth retardation, depression, and anxiety-like behavior.

Synonyms:

MGC141920; TRH-R

Product images:

Western blot analysis of rat brain (lanes 1 and 4), Jurkat cells (lanes 2 and 5) and MS1 cells (lanes 3 and 6) lysates: 1-3. Anti-Thyrotropin-Releasing Hormone Receptor 1 antibody, (1:200). 4-6. Anti-Thyrotropin-Releasing Hormone Receptor 1 antibody, preincubated with the control peptide antigen.



Expression of Thyrotropin-Releasing Hormone Receptor 1 in mouse MS1 cells. Immunocytochemical staining of mouse pancreatic islet endothelial (MS1) cells. Cells were stained using Anti-Thyrotropin-Releasing Hormone Receptor 1 antibody followed by goat-anti-rabbit-AlexaFluor-594 secondary antibody (red). Nuclear staining was demonstrated using DAPI as the counterstain (blue).