Anti-Thyroid Hormone Receptor, α_1/α_2-Isotype Antibody

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Catalog #: 1210-TRa **Size:** 100 µl
Isotype: IgG_1 **Clone:** 2103

Cite this Antibody: PhosphoSolutions Cat# 1210-TRa, RRID:AB_2492260

Host	Applications	Species Tested	Species Assumed*	Molecular Reference
Mouse	WB 1:1000	H, R	C, M, NHP	~50 kDa & ~58 kDa

Product Description: Protein G purified mouse monoclonal antibody.

Biological Significance: Thyroid hormones are essential for development of the central nervous system and deficits in these hormones during development affects such cognitive functions as learning and memory (Ambrogini et al., 2005; Chan and Kilby, 2000). Thyroid hormones exert their physiological role mainly through binding to specific nuclear receptors including the predominant isoforms of thyroid hormone receptors TRα1, TRα2, TRβ1 and TRβ2. TRα1, TRβ1 and TRβ2 bind T3 with high affinity and also bind to thyroid hormone response elements (TREs) on chromatin to regulate the transcriptional processes in several target tissues, including adult rat brain (Constantinou et al., 2005).

Antigen: Peptide corresponding to amino acid residues from the N-terminal region of human thyroid hormone receptor, α_1/α_2-isotype.

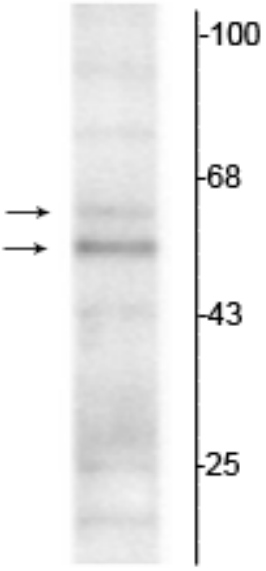
Antibody Specificity: Specific for endogenous levels of the ~50 kDa TR-α_1 and the ~58 kDa TR-α_2 proteins.

Purification Method: Protein G purified culture supernatant.

Quality Control Tests: Western blots performed on each lot.

Packaging: 100 µl in 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg BSA per ml and 50% glycerol.

Storage and Stability: Shipped on blue ice. Storage at -20°C is recommended, as aliquots may be taken without freeze/thawing due to presence of 50% glycerol. Stable for at least 1 year at -20°C.



Western blot of rat hippocampal lysate showing specific immunolabeling of the ~50 kDa TR-α_1 and the ~58 kDa TR-α_2 protein.

Application Key: **WB** = Western Blot **IF** = Immunofluorescence **IHC** = Immunohistochemistry **IP** = Immunoprecipitation
Species Reactivity Key: **All-**All Species **A-**Avian **Amp-**Amphibian **Ar-***Arabidopsis* **B-**Bovine **C-**Canine **Ch-**Chicken **D-***Drosophilia* **GP-**Guinea Pig **H-**Human **Ha-**Hamster **M-**Mouse **NHP-** Non-human primate **P-**Pig **R-**Rat **S-**Sheep **X-***Xenopus* **Z-**Zebrafish
*Species assumed based on 100% homology with sequence used as antigen **For Research Use Only**

General References:

Ambrogini P, Cuppini R, Ferri P, Mancini C, Ciaroni S, Voci A, Gerdoni E, Gallo G (2005) Thyroid hormones affect neurogenesis in the dentate gyrus of adult rat. Neuroendocrinology 81:244-253.

Chan S, Kilby MD (2000) Thyroid hormone and central nervous system development. J Endocrinol 165:1-8.

Constantinou C, Margarity M, Valcana T (2005) Region-specific effects of hypothyroidism on the relative expression of thyroid hormone receptors in adult rat brain. Mol Cell Biochem 278:93-100.

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