

Monoclonal Antibody to THRA / THRB TR alpha-1/beta-1 - Ascites

Alternate names:	THRA
Catalog No.:	SM5021
Quantity:	0.1 ml
Background:	Thyroid hormone receptors (TR) are ligand-dependent, intracellular proteins that stimulate transcription of specific genes by binding to specific DNA sequences called hormone response elements following activation by the appropriate hormone. Thyroid hormones, through their interaction with TR, effect metabolic processes, growth and development in many tissues by regulating the expression of genes for growth hormone, malic enzyme and several hepatic proteins. There are two forms of TR; TR alpha (on chromosome 17) and TR beta (on chromosome 3). Each of these isoforms also has two isoforms; TR alpha-1 and TRv alpha-2, and TR beta-1 and TR beta-2 respectively. TR alpha-1 and 2 are identical through amino acid 370 where their sequences diverge. TRv alpha-2, which does not bind T3 and is a strong negative regulator of the functional TR, is 80 amino acids longer than TR alpha-1.
Host / Isotype:	Mouse / IgG1
Clone:	C3
Immunogen:	Purified fragment of human TR beta-1 corresponding to amino acid residues 201-456.
Format:	State: Liquid diluted ascites. Buffer System: PBS containing 0.05% sodium azide as preservative.
Applications:	Gel Shift. Immunoprecipitation: SM5021 immunoprecipitates 52 kDa and 55 kDa proteins, representing TR beta-1 and a 48 kDa protein representing TR alpha-1 expressed in E. coli. Western Blot: 1/1000, detects a 55 and a 52 kDa protein representing recombinant human TR beta-1 expressed in E. coli. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.
Specificity:	SM5021 detects thyroid hormone receptor (TR) from human tissues. This antibody recognizes TR beta-1 and also cross-reacts with TR alpha-1. This antibody recognizes an epitope in the hormone binding domain of hTR beta-1, amino acid residues 235-414. This sequence is conserved in hTR alpha-1.
Storage:	Store the antibody at -20°C. Avoid repeated freezing and thawing. Shelf life: one year from despatch.
General Readings:	1. J. Biol. Chem., Nov 2000; 275: 38032. 2. Endocrinology, Apr 2007; 148: 1764 - 1773 3. Mol. Cell. Biol., Nov 2000; 20: 8329 - 8342.

4. Mol Endocrinology 18(7), 1631-1642, Jul 2004
5. Molecular Endocrinology 10.1210/me.2003-0289 2005
6. JBC 2005, manuscript number M411514200.
7. Biochem. Biophys. Res. Comm., 195(1): 385-392, 1993.

Pictures:

Figure 1. Western blot of human thyroid hormone receptor using SM5021.

