



FabGennix Inc.
INTERNATIONAL

New Item
New Item

Customer Service: 1-800 786 1236
Technical Service: 214 387 8105
Fax: 214 387 0870
Info@fabgennix.com
www.fabgennix.com

Antibodies to 18-kDa Translocator Protein (TSPO)

18-kDa Translocator Protein antibodies. Catalog # TSPO-101AP, FITC-TSPO, P-TSPO and PC-TSPO.

Alternate Nomenclature: Peripheral-type benzodiazepine receptor; Mitochondrial benzodiazepine receptor; PBR; PKBS, Accession # P30536

18-kDa Translocator Protein (TSPO) is one of the subunits of Peripheral-type benzodiazepine receptors (PBR), 30-kDa TSPO and 32-kDa TSPO are the other two subunits (1). 18-kDa TSPO, located at human chromosome 22q13.3 (2), binds isoquinone carboamide derivatives and is involved in a variety of host defense responses, developmental processes and mitochondrial functions. Specifically, it plays a major role in steroidogenesis, controlling cholesterol mitochondrial transport, apoptosis and host-defense response to disease and injury (3). Its ligands (such as porphyrins and diazepam-binding inhibitor) have been shown to control cell differentiation and proliferation (4). Furthermore, their binding capacity was enhanced in some malignant tumors and therefore, PBR is a potential drug target for cancer therapy (5).

PBR functions also include regulation of voltage-dependent calcium channels, responses to stress and microglia activation (6). PBR is densely populated in acute stress and sparsely populated in chronic stress (4). In blood cells, PBR is implicated in phagocytosis, secretion of interleukin-2, interleukin-3, and immunoglobulin A (IgA). In blood vessel walls, PBR takes part in responses to trauma such as ischemia (6). PBR can be found in platelets, erythrocytes, lymphocytes, mononuclear cells, endothelium, striated cardiac muscle, vascular smooth muscles and mast cells. 18-kDa TSPO is approximately an 18-kDa protein (160 amino acids).

The TSPO-selective antibodies were generated against synthetic peptide taken from near N-terminal end of human 18kDa translocator protein (TSPO). TSPO-antibodies are affinity purified over immobilized antigen based chromatography, and the purified immunoglobulins are stabilized in antibody stabilization buffer. FabGennix Int. Inc., will also provide limited quantities of antigenic blocking protein for Tms18-101AP antibody. Antibodies to 18-kDa TSPO (TSPO-101AP) will label ~18kDa protein in Western blot positive control samples for Netrn1 and several other tissues. FabGennix Inc. will also conjugate antibodies with secondary enzymes (alk-Pase or HRP) or fluorescent probes upon request at nominal cost.

Catalog #	Host Species	Nature	Cross reactivity	Quantity	Volume
TSPO-101 AP	Rabbit	Affinity purified TSPO antibodies	H, others n.d	100 ug	200ul
FITC- TSPO	Rabbit	FITC-conjugated TSPO antibody	H. others n.d	100ug	200ul
P- TSPO	n/a	Antigenic blocking peptide for TSPO-101AP	n/a	250 ug	100ul
PC-TSPO	n/a	Western blotting positive control for TSPO	n/a	For 5 appl	Inquire

R = rat; M = mouse; H = human; C = chicken; monk = monkey; * not all variants are labeled equally

Immunogen: Synthetic peptides corresponding to unique epitope on 18 kDa mitochondrial benzodiazepine receptor 18kDa protein. The peptide sequence (RDS YFY AVS DLQ VGC RCK CNG H) was unique to TSPO. The TSPO peptide was covalently modified post-synthetically covalently modified to achieve desired antigenicity.

Concentration: TSPO-101AP: IgG concentration 0.60-0.65 mg/ml in antibody stabilization buffer.

Applications: Antibody TSPO-101AP is ideal for WB and ELISA applications, other applications have not been tested. The antibody to TSPO label a 18kDa TSPO protein in TSPO western blot positive control samples.

These antibodies do not cross react to human lactoferrin, bovine lactoferrin or bovine serum albumin. The species cross reactivity for these antibodies have not been examined fully. The dilutions for this antibody is for reference only, investigators are expected to determine the optimal conditions for specific assay. WB: > 1:500; IMM & I.P pull-down assays: n.d; IHC n.d. ELISA <1:10,000. Application of this antibody in protocols not listed here does not necessarily exclude its use in such procedures.

Reactivity: This antibody detects a single band of approximately 18kDa in PC-Tms18 samples. The antibody does not cross react to...

Protocols: Standard protocol for various applications (WB; IMM and IHC) of this antibody is provided with the product specification sheet, however, FabGennix Inc., strongly recommends investigators to optimize conditions for use of this antibody in their laboratories.

Form/Storage: The antiserum is supplied in antibody stabilization buffer. The affinity-purified antibodies are isolated on immobilized antigen-affinity column and supplied as stabilized product. Store at -20°C for long-term storage. FabGennix Inc. does not recommend storage of very dilute antibody solutions unless they are prepared in specially formulated multi use antibody dilution buffer (Cat # DiluOBuffer). Working solutions of antibodies in DiluOBuffer should be filtered through 0.45um filter after every use for long-term storage.

Notes: Briefly centrifuge to collect liquid, heat or boil PC-Tms18 tube for 1-2 minutes to dissolve any precipitate before use. This product is "ready-to-use" for electrophoresis. After thawing store at room temperature, Repeated freezing and thawing may result in appearance of higher MW immunoreactive bands.

New Reagents: Now you can recycle your western blots (nitrocellulose, supported membranes and PVDF membranes) by using our StripOBuffer (Cat FGI-1989). Each stripping is guaranteed to give better signal (up to 8 stripping). No strong pungent smell of reducing agents or heating required. Block in 5X diluOBuffer and you are ready for blotting with a new antibody

References:

- McEnery MW. The mitochondrial benzodiazepine receptor: evidence for association with the voltage-dependent anion channel (VDAC). J Bioenerg Biomembr. February 1992; 24(1):63-69.
- Riond J, Mattei MG, Kaghad M, Dumont X, Guillemot JC, Le Fur G, Caput D, Ferrara P. Molecular cloning and chromosomal localization of a human peripheral-type benzodiazepine receptor. Eur J Biochem. 30 January 1991; 195(2):305-311.
- Veenman L, Papadopoulos V, Gavish M. Channel-like functions of the 18-kDa translocator protein (TSPO): regulation of apoptosis and steroidogenesis as part of the host-defense response. Curr Pharm Des. 2007; 13(23):2385-2405.
- Weizman R, Gavish M. Molecular cellular and behavioral aspects of peripheral-type benzodiazepine receptors. Clin Neuropharmacol. October 1993; 16(5):401-417.
- Costa B, Salvetti A, Rossi L, Spinetti F, Lena A, Chelli B, Rechichi M, DaPozzo E, Germini V, Martini C. Peripheral benzodiazepine receptor: characterization in human T-lymphoma Jurkat Cells. Mol Pharmacol. January 2006; 69(1):37-44.
- Veenman L, Gavish M. The peripheral-type benzodiazepine receptor and the cardiovascular system: Implications for Drug Development. Pharmacol Ther. June 2006; 110(3):503-524.

* For users who may require large amounts of Tms18-101AP, please enquire about bulk material discounts.
This Product is for Research Use Only and is NOT intended for use in humans or clinical diagnosis.

090408-0020SF100 ge02-rev10.00

FabGennix Inc.
INTERNATIONAL

5850 Town and Country Blvd. Suite 301. Frisco, TX 75034

Customer service: 1800 786 1236; Technical Support: 214 387 8105