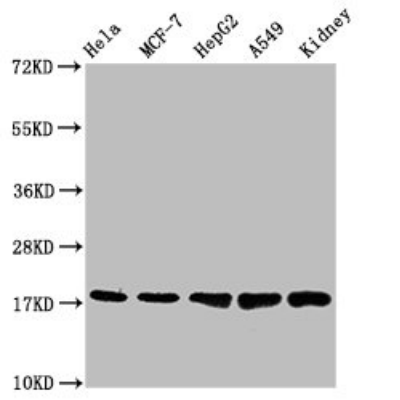
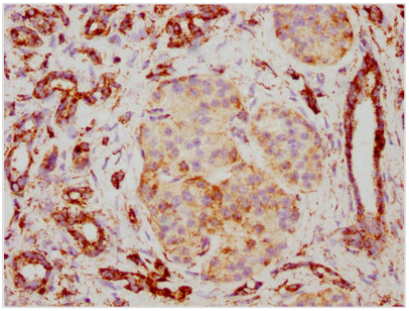
TSPO Recombinant Monoclonal Antibody

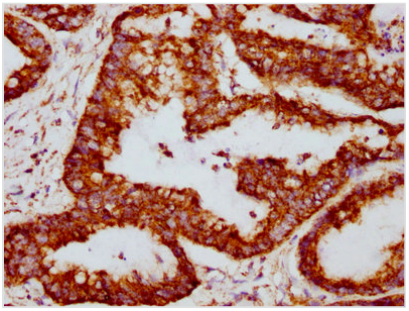
Product Code	CSB-RA025168A0HU
Abbreviation	Translocator protein
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P30536
Immunogen	A synthesized peptide derived from human TSPO
Species Reactivity	Human, Mouse
Tested Applications	ELISA, WB, IHC, IF, FC, IP; Recommended dilution: WB:1:500-1:5000, IHC:1:50-1:200, IF:1:20-1:200, IP:1:200-1:1000
Relevance	Can bind protoporphyrin IX and may play a role in the transport of porphyrins and heme (By similarity). Promotes the transport of cholesterol across mitochondrial membranes and may play a role in lipid metabolism (PubMed:24814875), but its precise physiological role is controversial. It is apparently not required for steroid hormone biosynthesis. Was initially identified as peripheral-type benzodiazepine receptor; can also bind isoquinoline carboxamides (PubMed:1847678).
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Alias	Translocator protein, Mitochondrial benzodiazepine receptor, PKBS, Peripheral-type benzodiazepine receptor, PBR, TSPO, BZRP, MBR
Immunogen Species	Homo sapiens (Human)
Research Area	Cardiovascular
Gene Names	TSPO
Clone No.	23G2
Image	



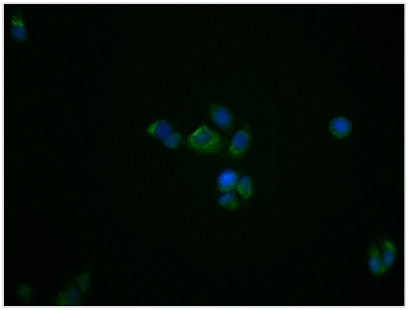
Western Blot
Positive WB detected in: Hela whole cell lysate, MCF-7 whole cell lysate, HepG2 whole cell lysate, A549 whole cell lysate, Mouse kidney tissue
All lanes: PBR antibody at 1.2µg/ml
Secondary
Goat polyclonal to rabbit IgG at 1/50000 dilution
Predicted band size: 19, 11 KDa
Observed band size: 19 KDa



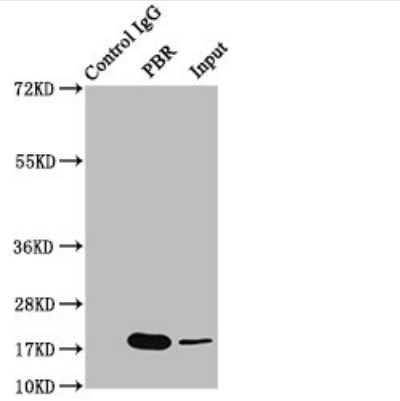
IHC image of CSB-RA025168A0HU diluted at 1:117 and staining in paraffin-embedded human pancreatic cancer performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4? overnight. The primary is detected by a biotinylated secondary antibody and visualized using an HRP conjugated SP system.



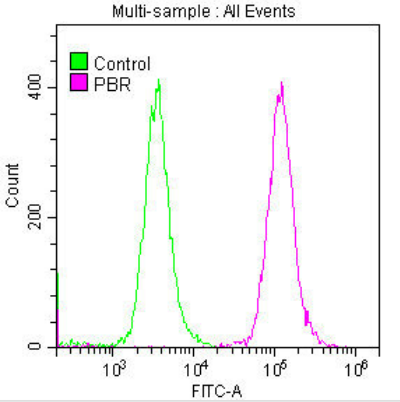
IHC image of CSB-RA025168A0HU diluted at 1:117 and staining in paraffin-embedded human colon cancer performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4? overnight. The primary is detected by a biotinylated secondary antibody and visualized using an HRP conjugated SP system.



Immunofluorescence staining of PC3 cells with CSB-RA025168A0HU at 1:39, counter-stained with DAPI. The cells were fixed in 4% formaldehyde, permeabilized using 0.2% Triton X-100 and blocked in 10% normal Goat Serum. The cells were then incubated with the antibody overnight at 4?. The secondary antibody was Alexa Fluor 488-congugated AffiniPure Goat Anti-Rabbit IgG (H+L).



Immunoprecipitating PTGS2 in Hela whole cell lysate
Lane 1: Rabbit control IgG instead of CSB-RA025168A0HU in Hela whole cell lysate. For western blotting, a HRP-conjugated Protein G antibody was used as the secondary antibody (1/2000)
Lane 2: CSB-RA025168A0HU (3μg) + Hela whole cell lysate (500μg)
Lane 3: Hela whole cell lysate (20μg)



Overlay histogram showing HepG2 cells stained with CSB-RA025168A0HU (red line) at 1:50. The cells were fixed with 70% Ethylalcohol (18h) and then permeabilized with 0.3% Triton X-100 for 2 min. The cells were then incubated in 1x PBS /10% normal goat serum to block non-specific protein-protein interactions followed by primary antibody for 1 h at 4?. The secondary antibody used was FITC goat anti-rabbit IgG (H+L) at 1/200 dilution for 1 h at 4?. Control antibody (green line) was used under the same conditions. Acquisition of >10,000 events was performed.

Description

The generation of the TSPO recombinant monoclonal antibody involves the utilization of DNA recombinant technology and in vitro genetic manipulation. Initially, animals are immunized with a synthesized peptide derived from human TSPO, leading to the isolation of B cells. Positive B cells are then identified and selected through screening and individual clone identification. The light and heavy chains of the TSPO antibody are subsequently amplified via PCR and inserted into a plasmid vector. This recombinant vector is then transfected into a host cell line to facilitate antibody expression. The TSPO recombinant monoclonal antibody is purified from the cell culture supernatant using affinity chromatography. This antibody specifically recognizes both human and mouse TSPO proteins and is suitable for six applications, including ELISA, WB, IHC, IF, FC, and IP.

The TSPO is located in the outer mitochondrial membrane and is involved in cholesterol transport and steroid biosynthesis. It has been shown to play a role in cell survival, proliferation, and apoptosis. TSPO has been implicated in various physiological processes, including the regulation of mitochondrial function, cellular energy metabolism, and calcium signaling. It also participates in various pathophysiological conditions, including neurodegenerative diseases, psychiatric disorders, and cancer.