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PTRF Antibody
Catalog # ASC11629

Specification

PTRF Antibody - Product Information

Application	**WB, IHC-P, IF, E**
Primary Accession	Q6NZI2
Other Accession	NP_036364, 42734430
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Calculated MW	**43 kDa KDa**
Application Notes	**PTRF antibody can be used for detection of PTRF by Western blot at 0.5 - 1 µg/mL.**

PTRF Antibody - Additional Information

Gene ID **284119**

Target/Specificity
PTRF; At least three isoforms of PTRF are known to exist; this antibody detects all three isoforms. It is predicted to not cross-react with other members of the cavin family.

Reconstitution & Storage
PTRF antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.

Precautions
PTRF Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

PTRF Antibody - Protein Information

Name CAVIN1 (HGNC:9688)

Synonyms PTRF

Function
Plays an important role in caveolae formation and organization. Essential for the formation of caveolae in all tissues (PubMed:18056712, PubMed:18191225, PubMed:19726876). Core component of the CAVIN complex which is essential for recruitment of the complex to the caveolae in presence of calveolin-1 (CAV1). Essential for normal oligomerization of CAV1. Promotes ribosomal transcriptional activity in response to metabolic challenges in the adipocytes and plays an important role in the formation of the ribosomal transcriptional loop. Dissociates transcription complexes paused by DNA-bound TTF1, thereby releasing both RNA polymerase I and pre-RNA from the template (By similarity) (PubMed:18056712, PubMed:18191225, PubMed:<a

href="http://www.uniprot.org/citations/19726876" target="_blank">19726876). The caveolae biogenesis pathway is required for the secretion of proteins such as GASK1A (By similarity).

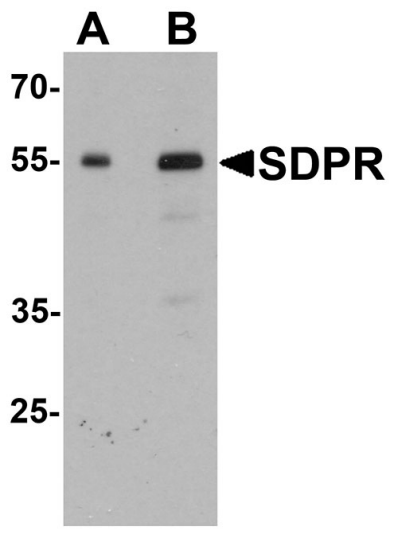
Cellular Location
Membrane, caveola. Cell membrane. Microsome. Endoplasmic reticulum {ECO:0000250|UniProtKB:P85125}. Cytoplasm, cytosol. Mitochondrion. Nucleus Note=Translocates to the cytoplasm from the caveolae upon insulin stimulation (PubMed:17026959). Colocalizes with CAV1 in lipid rafts in adipocytes. Localizes in the caveolae in a caveolin-dependent manner (By similarity). {ECO:0000250|UniProtKB:O54724, ECO:0000269|PubMed:17026959}

PTRF Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

PTRF Antibody - Images



Western blot analysis of PTRF in human spleen tissue lysate with PTRF antibody at (A) 0.5 and (B) 1 µg/mL

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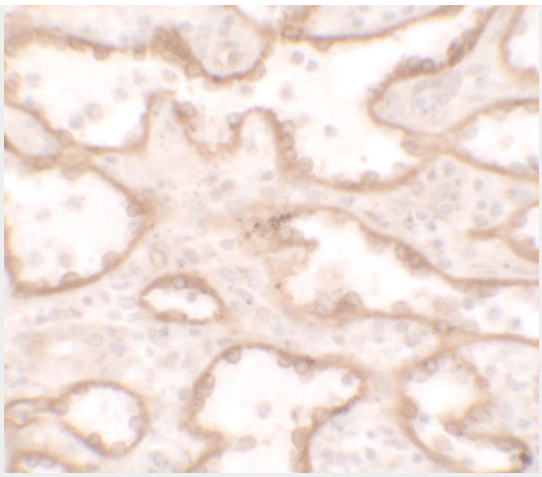
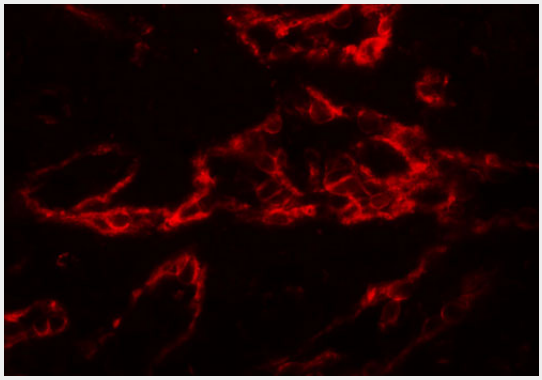


Immunohistochemistry of PTRF in spleen tissue with PTRF antibody at 5 µg/ml.



Immunofluorescence of PTRF in human spleen tissue with PTRF antibody at 20 µg/ml.

PTRF Antibody - Background

PTRF Antibody: The polymerase I and transcript release factor (PTRF) enables the dissociation of paused ternary polymerase I transcription complexes from the 3' end of pre-rRNA transcripts, regulating rRNA transcription by promoting the dissociation of transcription complexes and the re-initiation of polymerase I on nascent rRNA transcripts. PTRF also localizes to caveolae at the plasma membrane and is thought to play a critical role in the formation of caveolae and the stabilization of caveolins, translocating from caveolae to the cytoplasm after insulin stimulation. PTRF is also thought to modify lipid metabolism and insulin-regulated gene expression. Mutations in this gene result in a disorder characterized by generalized lipodystrophy and muscular dystrophy.

PTRF Antibody - References

Jansa P, Mason SW, Hoffmann-Rohrer U, et al. Cloning and functional characterization of PTRF, a novel protein which induces dissociation of paused ternary transcription complexes. EMBO J. 1998; 17:2855-64.
Vinten J, Johnsen AH, Roepstorff P, et al. Identification of a major protein on the cytosolic face of caveolae. Biochim. Biophys. Acta 2005; 1717:34-40.
Aboulaich N, Ortegren U, Vener AV, et al. Association and insulin regulated translocation of hormone-sensitive lipase with PTRF. Biochem. Biophys. Res. Commun. 2006; 350:657-61.
Aboulaich N, Chui PC, Asara JM, et al. Polymerase I and transcript release factor regulates lipolysis via a phosphorylation-dependent mechanism. Diabetes 2011; 60:757-65.