

TRAP-α (C-8): sc-373916

BACKGROUND

The TRAP proteins (translocon-associated proteins), TRAP-α, TRAP-β, TRAP-γ and TRAP-δ, are transmembrane proteins that comprise a heterotetramer complex (the signal sequence receptor (SSR) or TRAP complex) that localizes to the endoplasmic reticulum (ER) and functions in regulating the retention of ER resident proteins. The TRAP complex associates with the Sec61 translocon at the ER. Sec61 is the major complex mediating protein translocation across the ER membrane. In addition, the TRAP complex is involved in ER-associated degradation (ERAD); in response to ER stress the TRAP complex subunits are simultaneously induced by the XBP-1/IRE1α pathway. TRAP-α (also known as SSR1 or SSR-α), TRAP-β (also known as SSR-β, SSR2 or TLAP) and TRAP-δ (also known as SSR4) are all single-pass membrane proteins, while TRAP-γ (also known as SSR3 or SSR-γ) contains four transmembrane domains.

REFERENCES

1. Hartmann, E., et al. 1993. A tetrameric complex of membrane proteins in the endoplasmic reticulum. *Eur. J. Biochem.* 214: 375-381.
2. Brenner, V., et al. 1997. Genomic organization of two novel genes on human Xq28: compact head to head arrangement of IDH γ and TRAP δ is conserved in rat and mouse. *Genomics* 44: 8-14.
3. Wang, L., et al. 1999. Oligomeric complexes involved in translocation of proteins across the membrane of the endoplasmic reticulum. *FEBS Lett.* 457: 316-322.

CHROMOSOMAL LOCATION

Genetic locus: SSR1 (human) mapping to 6p24.3; Ssr1 (mouse) mapping to 13 A3.3.

SOURCE

TRAP-α (C-8) is a mouse monoclonal antibody raised against amino acids 1-286 representing full length TRAP-α of human origin.

PRODUCT

Each vial contains 200 μg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TRAP-α (C-8) is available conjugated to agarose (sc-373916 AC), 500 μg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-373916 HRP), 200 μg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-373916 PE), fluorescein (sc-373916 FITC), Alexa Fluor® 488 (sc-373916 AF488), Alexa Fluor® 546 (sc-373916 AF546), Alexa Fluor® 594 (sc-373916 AF594) or Alexa Fluor® 647 (sc-373916 AF647), 200 μg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-373916 AF680) or Alexa Fluor® 790 (sc-373916 AF790), 200 μg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

TRAP-α (C-8) is recommended for detection of TRAP-α of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μg per 100-500 μg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for TRAP-α siRNA (h): sc-63153, TRAP-α siRNA (m): sc-63154, TRAP-α shRNA Plasmid (h): sc-63153-SH, TRAP-α shRNA Plasmid (m): sc-63154-SH, TRAP-α shRNA (h) Lentiviral Particles: sc-63153-V and TRAP-α shRNA (m) Lentiviral Particles: sc-63154-V.

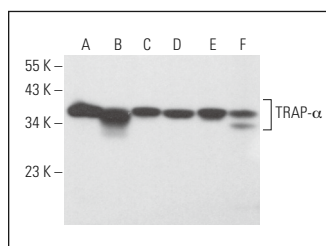
Molecular Weight of TRAP-α: 32 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209, Hep G2 cell lysate: sc-2227 or Neuro-2A whole cell lysate: sc-364185.

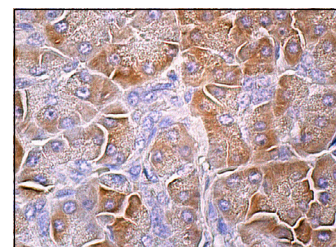
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



TRAP-α (C-8): sc-373916. Western blot analysis of TRAP-α expression in HL-60 (A), Hep G2 (B), HeLa (C), NIH/3T3 (D) and Neuro-2A (E) whole cell lysates and rat liver tissue extract (F).



TRAP-α (C-8): sc-373916. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Ahlstedt, B.A., et al. 2024. UBXN1 maintains ER proteostasis and represses UPR activation by modulating translation. *EMBO Rep.* 25: 672-703.

RESEARCH USE

For research use only, not for use in diagnostic procedures.