

HSP 56 (329.1): sc-100758

BACKGROUND

HSP 56 (also designated FKBP4, FK506 binding protein 4, HBI, p52, FKBP52, FKBP59 and PPlase) is a *cis-trans* prolyl isomerase belonging to the immunophilin protein family. The human HSP 56 gene (FKBP4) has multiple polyadenylation sites and the HSP 56 protein can undergo phosphorylation. HSP 56 influences immunoregulatory gene expression in lymphocytes, protein folding and trafficking. It can serve as a co-chaperone for steroid hormone nuclear receptors to govern appropriate hormone action in target tissues. The protein can associate with phytanoyl-CoA α -hydroxylase (PHYH) and with HSP90 through a series of tetratricopeptide repeat (TPR) domains. HSP 56 is a TRPC ion channel accessory protein that modulates channel activation following receptor stimulation.

REFERENCES

1. Sumanasekera, W.K., et al. 2003. Heat shock protein 90 (HSP 90) acts as a repressor of peroxisome proliferator-activated receptor α (PPAR α) and PPAR β activity. *Biochemistry* 42: 10726-10735.
2. Galigniana, M.D., et al. 2004. HSP 90-binding immunophilins link p53 to Dynein during p53 transport to the nucleus. *J. Biol. Chem.* 279: 22483-22489.

CHROMOSOMAL LOCATION

Genetic locus: FKBP4 (human) mapping to 12p13.33; Fkbp4 (mouse) mapping to 6 F3.

SOURCE

HSP 56 (329.1) is a mouse monoclonal antibody raised against recombinant HSP 56 of human origin.

PRODUCT

Each vial contains 100 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

HSP 56 (329.1) is recommended for detection of HSP 56 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for HSP 56 siRNA (h): sc-35602, HSP 56 siRNA (m): sc-35603, HSP 56 siRNA (r): sc-270296, HSP 56 shRNA Plasmid (h): sc-35602-SH, HSP 56 shRNA Plasmid (m): sc-35603-SH, HSP 56 shRNA Plasmid (r): sc-270296-SH, HSP 56 shRNA (h) Lentiviral Particles: sc-35602-V, HSP 56 shRNA (m) Lentiviral Particles: sc-35603-V and HSP 56 shRNA (r) Lentiviral Particles: sc-270296-V.

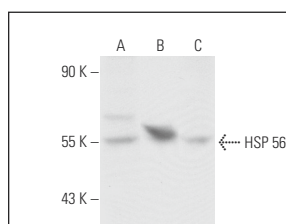
Molecular Weight of HSP 56: 56 kDa.

Positive Controls: HSP 90 (h): 293T Lysate: sc-175155, Jurkat whole cell lysate: sc-2204 or HSP 56 (m2): 293T Lysate: sc-110358.

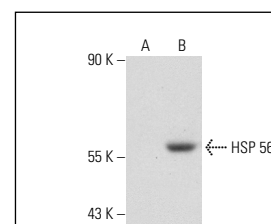
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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).

DATA



HSP 56 (329.1): sc-100758. Western blot analysis of HSP 56 expression in non-transfected 293T: sc-117752 (A), human HSP 56 transfected 293T: sc-117752 (B) and Jurkat (C) whole cell lysates.



HSP 56 (329.1): sc-100758. Western blot analysis of HSP 56 expression in non-transfected: sc-117752 (A) and mouse HSP 56 transfected: sc-110358 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Caldwell, K.K., et al. 2014. Prenatal alcohol exposure is associated with altered subcellular distribution of glucocorticoid and mineralocorticoid receptors in the adolescent mouse hippocampal formation. *Alcohol. Clin. Exp. Res.* 38: 392-400.
2. Brkic, Z., et al. 2016. Male-specific effects of lipopolysaccharide on glucocorticoid receptor nuclear translocation in the prefrontal cortex of depressive rats. *Psychopharmacology* 233: 3315-3330.
3. Li, H., et al. 2020. The glucocorticoid receptor-FKBP51 complex contributes to fear conditioning and posttraumatic stress disorder. *J. Clin. Invest.* 130: 877-889.
4. Yilmaz, S., et al. 2022. The role of cycloastragenol at the intersection of NRF2/ARE, telomerase, and proteasome activity. *Free Radic. Biol. Med.* 188: 105-116.
5. Wang, L., et al. 2024. FKBP51-Hsp90 interaction-deficient mice exhibit altered endocrine stress response and sex differences under high-fat diet. *Mol. Neurobiol.* 61: 1479-1494.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.