

probasin (F-6): sc-393830

BACKGROUND

Functional differentiation of prostatic epithelium is manifested by the production of tissue specific secretory proteins. Production of these proteins is dependent on the presence of serum androgens, such as probasin. Probasin (PB) occurs both as a secreted and a nuclear protein that is abundantly expressed in the epithelial cells of the prostate. Probasin is a prostate-specific and androgen-regulated protein, and it is useful as a marker of prostate differentiation. Androgen-specific regulation of probasin gene transcription requires two androgen receptor-binding sites, which are contained within the 5'-flanking end of the probasin androgen-responsive region. The binding of the androgen receptor to both sites occurs in a cooperative, mutually dependent manner.

REFERENCES

- Rennie, P.S., et al. 1993. Characterization of two *cis*-acting DNA elements involved in the androgen regulation of the probasin gene. *Mol. Endocrinol.* 7: 23-36.
- Kasper, S., et al. 1994. Cooperative binding of androgen receptors to two DNA sequences is required for androgen induction of the probasin gene. *J. Biol. Chem.* 269: 31763-31769.
- Lopes, E.S., et al. 1996. Initiation of secretory activity of rat prostatic epithelium in organ culture. *Endocrinology* 137: 4225-4234.
- Kasper, S., et al. 1998. Development, progression, and androgen-dependence of prostate tumors in probasin-large T antigen transgenic mice: a model for prostate cancer. *Lab. Invest.* 78: i-xv.

CHROMOSOMAL LOCATION

Genetic locus: Pbsn (mouse) mapping to X A7.3.

SOURCE

probasin (F-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 133-158 near the C-terminus of probasin of mouse 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.

probasin (F-6) is available conjugated to agarose (sc-393830 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393830 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393830 PE), fluorescein (sc-393830 FITC), Alexa Fluor[®] 488 (sc-393830 AF488), Alexa Fluor[®] 546 (sc-393830 AF546), Alexa Fluor[®] 594 (sc-393830 AF594) or Alexa Fluor[®] 647 (sc-393830 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-393830 AF680) or Alexa Fluor[®] 790 (sc-393830 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-393830 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

probasin (F-6) is recommended for detection of probasin of mouse 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for probasin siRNA (m): sc-39717, probasin shRNA Plasmid (m): sc-39717-SH and probasin shRNA (m) Lentiviral Particles: sc-39717-V.

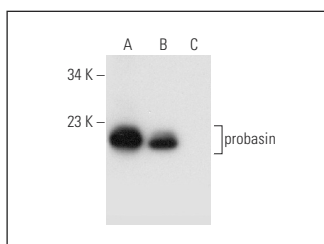
Molecular Weight of probasin: 22 kDa.

Positive Controls: mouse prostate extract: sc-364249.

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.

DATA



probasin (F-6): sc-393830. Western blot analysis of probasin expression in mouse prostate (A), rat prostate (B) and human prostate (C) tissue extracts. Note lack of reactivity with human probasin in lane C.

SELECT PRODUCT CITATIONS

- Olson, A.W., et al. 2021. Stromal androgen and hedgehog signaling regulates stem cell niches in pubertal prostate development. *Development* 148: dev199738.

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.