

Table 5. Epididymal expression of foreign genes driven by transgenic reporters

| Transgene Characteristics | Expression | Reference |
|--|--|--|
| Rat heat-shock protein 70 (HSP70) promoter fused to CAT reporter gene | Expression in brain, pituitary, epididymis, vas deferens, adrenals, spleen, lung, ovary, oviduct and uterus | Scieglinska et al., 1997 |
| 4 kb 5' flanking sequence of β 1 chain fused to β -gal reporter | Expression in E 14.5 and at birth; transiently expressed in testis and differentiating epithelial cells in epididymis, ductus deferens and seminal vesicles. With 0.7 kb promoter, expression restricted to testis | Li and Gudas, 1997 |
| C-terminal truncated mouse EGF receptor under control of MMTV LTR. Protein lacks cytoplasmic domain and tyrosine kinase domain. Acts as a dominant negative in vitro. | Transgene expressed at the mRNA and protein level in mammary gland, salivary glands, and epididymis | Xie et al., 1997 |
| 1.542 kb fragment of kidney androgen regulated protein (KAP) promoter fused to human angiotensinogen (HAGT) gene | Renal expression only induced following androgen administration. Expressed in epididymis | Ding et al., 1997 |
| 5' regulatory region of glutamine synthetase gene fused to CAT reporter gene | 5' region active during development of pericentral hepatocytes, intestines and epididymis | Lie-Venema et al., 1997a,b |
| Human cellular retinol-binding protein type 1 [hCRBP 1] fused to mouse metallithionein 1 promoter. No transgenics produced when the SR (α) promoter was used. | High content of hCRBP 1 observed in intestine, kidney and epididymis | Troen et al., 1996 |
| 3 kb and 1 kb human proenkephalin 5' flanking sequences fused to β -galactosidase | Expressed in proximal epididymis, in developing germ cells but not in mature or elongating spermatids | Borsook et al., 1992 |
| 4 kb 5' flanking and 1 kb 3' flanking rabbit uteroglobin gene | Expressed in lung, uterus, and epithelial layers of epididymis and ductus deferens | Sandmoller et al., 1991 |
| 5.5 kb ABP/SHBG rat genomic DNA 200-2000 copies microinjected into pronuclei of fertilized mouse eggs | Over expression of ABP in testis and epididymis. Up-regulation of a 39 kDa protein. Defects in spermatogenesis | Reventos et al., 1993; Joseph et al., 1997 |
| 5 kb promoter fragment of murine epididymal retinoic acid-binding protein fused to CAT | Expression restricted to distal caput epididymidis Transgene regulated by androgens | Lareyre et al., 1999 |
| 5.3 kb promoter fragment of murine epididymal protein 17 fused to CAT | Expression restricted to initial segment | Suzuki et al., 2001 |

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| Transgene Characteristics | Expression | Reference |
|---|---|--|
| Urokinase-type plasminogen activator promoter fused to LacZ | Epididymis, placenta and colon | Wang et al., 2003 |
| 5.3 kb mEP17 promoter fused to CAT | Initial segment and expression dependent upon testicular factors | Suzuki et al., 2003 |
| 0.3 and 0.6 kb PEM promoter fused to GFP | 0.3 kb – caput and aberrant corpus expression; 0.6 kb – Epididymis and stage IV-VIII Sertoli cells | Rao et al., 2002 (0.3 kb experiments, 2003 (0.6 kb experiments) |
| 10 kb upstream and 1.5 kb downstream mouse alcohol dehydrogenase 1 (adh1) | kidney, adrenal, lung, epididymis, ovary and skin but promotes ectopic expression in thymus and spleen while failing to control expression in liver, eye, intestine and seminal vesicle | Szalai et al., 2002 |

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