

Inva5b1 Mouse

Catalogue number: 151442

Sub-type: Mouse

Images:

Contributor

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Images:

Tool details

***FOR RESEARCH USE ONLY**

Name: Inva5b1 Mouse

Alternate name:

Class:

Conjugate:

Description: Disease model for psoriasis; in vivo study of human $\alpha 5$ and $\beta 1$ integrin transgene expression in skin A transgenic mouse expressing integrin $\alpha 5\beta 1$ in the suprabasal layers of the epidermis. The mouse exhibits many of the characteristics associated with psoriasis including hyperproliferation of keratinocytes and infiltration of lymphocytes. Granted patents are associated with this mouse (US6187993 and AU0698317). Alpha5beta1 integrin transgenes under involucrin promoter, giving conditional suprabasal epidermal expression. Psoriasis phenotype

Purpose:

Parental cell:

Organism:

Tissue:

Model:

Gender:

Isotype:

Reactivity:

Selectivity:

Host:

Immunogen:

Immunogen UNIPROT ID:

Sequence:

Growth properties:

Production details: Involucrin-integrin transgene expression constructs were injected into fertilised

oocytes from F1 hybrid CBA/C57BL/6 mice. Transgene-positive mice were back-crossed to generate individual founder lines. The a5 transgene founder line was mated to the b1 integrin founder line to generate mice expressing both a5 and b1 integrin transgenes.

Formulation:

Recommended controls:

Bacterial resistance:

Selectable markers:

Additional notes: The Inv-a5b1 mouse presents a phenotype very similar to psoriasis, and is an ideal tool for study of the disease in vivo. Abnormal keratinocyte differentiation - widespread thickening of the epidermis Keratinocyte hyperproliferation - flaking epidermis. High numbers of Ki-67 positive cells in all basal and suprabasal layers - Keratin 6 expression in all epidermal layers - Inflammatory skin lesions - dilated capillaries and reddening of skin - Pustules with neutrophil infiltration within or beneath cornified layers - high numbers of CD4 and CD8 lymphocytes within epidermis There are a number of other psoriasis disease models please see the related page.

Target details

Target: a5 integrin, b1 integrin

Target alternate names:

Target background:

Molecular weight:

Ic50:

Applications

Application:

Application notes:

Handling

Format:
Concentration:
Passage number:
Growth medium:
Temperature:
Atmosphere:
Volume:
Storage medium:
Storage buffer:
Storage conditions:
Shipping conditions: Embryo/Spermatozoa- Dry Ice

Related tools

Related tools: Inva2b1 Mouse ; Inva3b1 Mouse ; InvEE Mouse

References

References: Hagiya et al. 2017. Front Physiol. 8:997. PMID: 29259558. ; Kuga et al. 2016. Sci Rep. 6:26557. PMID: 27222304. ; Haikala et al. 2016. Cell Cycle. 15(3):316-23. PMID: 26873145. ; Bohn et al. 2010. Int J Clin Exp Pathol. 3(6):600-7. PMID: 20661408. ; p16INK4a expression in basal-like breast carcinoma. ; Kurzrock et al. 2008. Am J Physiol Renal Physiol. 294(6):F1415-21. PMID: 18367656. ; Label-retaining cells of the bladder: candidate urothelial stem cells. ; Purkis et al. 1990. J Cell Sci. 97 (Pt 1):39-50. PMID: 1701769. ; Antibody markers of basal cells in complex epithelia. ; Schaafsma et al. 1990. Am J Pathol. 136(2):329-43. PMID: 1689541. ; Distribution of cytokeratin polypeptides in human transitional cell carcinomas, with special emphasis on changing expression patterns during tumor progression.