

### NRK-52E | 305196

#### General Information

**Description** NRK-52E, normal rat kidney epithelial cells, derived from a 52-day-old male Wistar-Kyoto rat. The cells are immortalized by transfection with SV40 large T antigen and are maintained in DMEM supplemented with 10% fetal bovine serum (FBS). NRK-52E cells are highly proliferative and express a variety of renal epithelial markers. NRK-52E cells are suitable for a wide range of applications, including cell-based assays, drug screening, and protein production.

**Organism** Rat

**Tissue** Kidney

**Synonyms** NRK 52E, NRK52E, NRK clone 52E, Normal Rat Kidney-52E, NRK-E52

#### Characteristics

**Breed/Subspecies** Wistar-Kyoto - Rat

**Morphology** Epithelial

**Growth properties** Adherent

#### Documentation

**Citation** NRK-52E (ATCC CCL-221) | Cytion 305196

**Biosafety level** 1

**NCBI\_TaxID** 10116

**CellosaurusAccession** CVCL\_0468

#### Media and Reagents

#### Media

**Culture Medium** DMEM:Ham's F12 (1:1), w: 3.1 g/L D-glucose, w: 2.5 mM L-glutamine, w: 15 mM HEPES, w: 0.5 mM sodium pyruvate, w: 1.2 g/L NaHCO3 820400a)

Product sheet

NRK-52E | 305196

**Supplements** 10% FBS

**Dissociation Reagent**

**Subculturing** 1. Add 1 ml of 10% FBS medium to each well. 2. Incubate at 37°C for 24 hours. 3. Aspirate medium and add 1 ml of 10% FBS medium. 4. Incubate at 37°C for 24 hours. 5. Aspirate medium and add 1 ml of 10% FBS medium. 6. Incubate at 37°C for 24 hours. 7. Aspirate medium and add 1 ml of 10% FBS medium. 8. Incubate at 37°C for 24 hours. 9. Aspirate medium and add 1 ml of 10% FBS medium. 10. Incubate at 37°C for 24 hours. 11. Aspirate medium and add 1 ml of 10% FBS medium. 12. Incubate at 37°C for 24 hours. 13. Aspirate medium and add 1 ml of 10% FBS medium. 14. Incubate at 37°C for 24 hours. 15. Aspirate medium and add 1 ml of 10% FBS medium. 16. Incubate at 37°C for 24 hours. 17. Aspirate medium and add 1 ml of 10% FBS medium. 18. Incubate at 37°C for 24 hours. 19. Aspirate medium and add 1 ml of 10% FBS medium. 20. Incubate at 37°C for 24 hours. 21. Aspirate medium and add 1 ml of 10% FBS medium. 22. Incubate at 37°C for 24 hours. 23. Aspirate medium and add 1 ml of 10% FBS medium. 24. Incubate at 37°C for 24 hours. 25. Aspirate medium and add 1 ml of 10% FBS medium. 26. Incubate at 37°C for 24 hours. 27. Aspirate medium and add 1 ml of 10% FBS medium. 28. Incubate at 37°C for 24 hours. 29. Aspirate medium and add 1 ml of 10% FBS medium. 30. Incubate at 37°C for 24 hours. 31. Aspirate medium and add 1 ml of 10% FBS medium. 32. Incubate at 37°C for 24 hours. 33. Aspirate medium and add 1 ml of 10% FBS medium. 34. Incubate at 37°C for 24 hours. 35. Aspirate medium and add 1 ml of 10% FBS medium. 36. Incubate at 37°C for 24 hours. 37. Aspirate medium and add 1 ml of 10% FBS medium. 38. Incubate at 37°C for 24 hours. 39. Aspirate medium and add 1 ml of 10% FBS medium. 40. Incubate at 37°C for 24 hours. 41. Aspirate medium and add 1 ml of 10% FBS medium. 42. Incubate at 37°C for 24 hours. 43. Aspirate medium and add 1 ml of 10% FBS medium. 44. Incubate at 37°C for 24 hours. 45. Aspirate medium and add 1 ml of 10% FBS medium. 46. Incubate at 37°C for 24 hours. 47. Aspirate medium and add 1 ml of 10% FBS medium. 48. Incubate at 37°C for 24 hours. 49. Aspirate medium and add 1 ml of 10% FBS medium. 50. Incubate at 37°C for 24 hours. 51. Aspirate medium and add 1 ml of 10% FBS medium. 52. Incubate at 37°C for 24 hours. 53. Aspirate medium and add 1 ml of 10% FBS medium. 54. Incubate at 37°C for 24 hours. 55. Aspirate medium and add 1 ml of 10% FBS medium. 56. Incubate at 37°C for 24 hours. 57. Aspirate medium and add 1 ml of 10% FBS medium. 58. Incubate at 37°C for 24 hours. 59. Aspirate medium and add 1 ml of 10% FBS medium. 60. Incubate at 37°C for 24 hours. 61. Aspirate medium and add 1 ml of 10% FBS medium. 62. Incubate at 37°C for 24 hours. 63. Aspirate medium and add 1 ml of 10% FBS medium. 64. Incubate at 37°C for 24 hours. 65. Aspirate medium and add 1 ml of 10% FBS medium. 66. Incubate at 37°C for 24 hours. 67. Aspirate medium and add 1 ml of 10% FBS medium. 68. Incubate at 37°C for 24 hours. 69. Aspirate medium and add 1 ml of 10% FBS medium. 70. Incubate at 37°C for 24 hours. 71. Aspirate medium and add 1 ml of 10% FBS medium. 72. Incubate at 37°C for 24 hours. 73. Aspirate medium and add 1 ml of 10% FBS medium. 74. Incubate at 37°C for 24 hours. 75. Aspirate medium and add 1 ml of 10% FBS medium. 76. Incubate at 37°C for 24 hours. 77. Aspirate medium and add 1 ml of 10% FBS medium. 78. Incubate at 37°C for 24 hours. 79. Aspirate medium and add 1 ml of 10% FBS medium. 80. Incubate at 37°C for 24 hours. 81. Aspirate medium and add 1 ml of 10% FBS medium. 82. Incubate at 37°C for 24 hours. 83. Aspirate medium and add 1 ml of 10% FBS medium. 84. Incubate at 37°C for 24 hours. 85. Aspirate medium and add 1 ml of 10% FBS medium. 86. Incubate at 37°C for 24 hours. 87. Aspirate medium and add 1 ml of 10% FBS medium. 88. Incubate at 37°C for 24 hours. 89. Aspirate medium and add 1 ml of 10% FBS medium. 90. Incubate at 37°C for 24 hours. 91. Aspirate medium and add 1 ml of 10% FBS medium. 92. Incubate at 37°C for 24 hours. 93. Aspirate medium and add 1 ml of 10% FBS medium. 94. Incubate at 37°C for 24 hours. 95. Aspirate medium and add 1 ml of 10% FBS medium. 96. Incubate at 37°C for 24 hours. 97. Aspirate medium and add 1 ml of 10% FBS medium. 98. Incubate at 37°C for 24 hours. 99. Aspirate medium and add 1 ml of 10% FBS medium. 100. Incubate at 37°C for 24 hours.

**Fluid renewal** 2 x 3 days

**Freeze medium** 10% FBS + 10% DMSO

- Thawing and Culturing Cells**
1. Thaw cells in a 37°C water bath.
  2. Add 1 ml of 10% FBS medium to each well.
  3. Incubate at 37°C for 24 hours.
  4. Aspirate medium and add 1 ml of 10% FBS medium.
  5. Incubate at 37°C for 24 hours.
  6. Aspirate medium and add 1 ml of 10% FBS medium.
  7. Incubate at 37°C for 24 hours.
  8. Aspirate medium and add 1 ml of 10% FBS medium.

**Incubation Atmosphere** 37°C, 5% CO<sub>2</sub>

**Flask Coating**

**Freezing Procedure**

Product sheet

NRK-52E | 305196

**Shipping Conditions** -78°C

**Storage Conditions**

Store at -150 to 196 °C

HLA

**Sterility**