

## Product Information

### ANTI-E1A (Adenovirus Early Region 1A)

Developed in Sheep, Fractionated Antiserum

Product Number **A 4345**

#### Product Description

Anti-E1A (Adenovirus Early Region 1A) is developed in sheep using a GST-E1A fusion protein as immunogen. Whole antiserum is salt-fractionated to provide primarily the immunoglobulin fraction of antiserum.

Anti-E1A (Adenovirus Early Region 1A) recognizes human E1A using immunoblotting (43 kDa).

The adenovirus early region 1A gene (E1A), the first viral gene expressed in a cell after adenovirus infection, encodes two major proteins, 243R (12S) and 289R (13S), that are produced by alternative splicing.<sup>1</sup> The primary function of these two proteins is to activate viral promoters of early genes, including E1B, E2A, E3, and E4, during viral infection by modifying the host cell transcriptional apparatus, thereby resulting in host cell immortalization or transformation.<sup>2</sup> Cellular genes that are transcriptionally activated by the E1A proteins include those encoding  $\beta$ -tubulin,<sup>3</sup> heat shock proteins,<sup>4</sup> c-Fos,<sup>5,6</sup> c-Jun,<sup>5</sup> JunB,<sup>5</sup> and c-Myc.<sup>7</sup> E1A can also repress several viral and cellular genes at the transcriptional level, such as the simian virus 40 enhancer,<sup>7,8</sup> the polyomavirus enhancer,<sup>7,9</sup> the immunoglobulin heavy-chain gene,<sup>10</sup> the cytochrome P450 gene,<sup>11</sup> the insulin gene,<sup>13</sup> and the Her-2/neu gene.<sup>14</sup>

Transformation is probably the result of disturbances in a variety of cellular basal programs, like proliferation, differentiation, and programmed cell death.<sup>14</sup> A well-characterized effect of transfected E1A alone is a marked increase in cell sensitivity to DNA damaging agents in epithelial tumor<sup>15,16</sup> and immortalized cells,<sup>17,18</sup> as well as in primary embryo fibroblasts.<sup>19,20</sup> It is likely that the basis of E1A-induced enhanced sensitivity to DNA damage relies at least partially in the lowering of the apoptotic threshold, by acting at a distal step in the programmed cell death pathway.

#### Reagent

Anti-E1A (Adenovirus Early Region 1A) is supplied as 1 mg/ml fractionated antiserum in phosphate buffered saline, containing 0.08% sodium azide.

#### Precautions and Disclaimer

Due to the sodium azide content a material safety sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution.

Consult the MSDS for information regarding hazards and safe handling practices.

#### Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. Storage in "frost-free" freezers is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

#### Product Profile

A working concentration of 1 to 10  $\mu$ g/ml is recommended for immunoblotting using a whole extract of 293 cells. HCT116 cells may be used as a negative control.

Note: In order to obtain best results in different techniques and preparations we recommend determining optimal working concentration by titration test.

#### References

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