Action mechanism of adenosine: Adenosine binds either to A<sub>2A/B</sub> receptor and activates adenylate cyclase (AC) through stimulatory G-protein (Gs) or to A<sub>1</sub> receptor and inhibits AC via inhibitory G-protein (Gi). When adenosine binds to A<sub>2A/B</sub> receptor, adenylate cyclase is activated, which converts ATP to cAMP that in turn activates protein kinase A (PKA) phosphorylating proteins leading to various cellular responses. Active PKA may also phosphorylate Ca<sup>2+</sup> channels, opening them up and helping in the influx of Ca<sup>2+</sup> and efflux of K<sup>+</sup> ions. Alternatively, when adenosine binds to A<sub>1</sub> subunit the entire process is negatively regulated. R: regulatory subunit; C: catalytic subunit; P: phosphate; PPI: inorganic pyrophosphate.

Predicted three dimensional structure of chicken ADA using Modeller software. The structure was modeled using a human ADA template 31AR. The chicken protein sequence (QZK56) was retrieved from NCBI server. The sequence identity was found to be 66%. The structure consists of a parallel α/β-barrel motif and the active site contains a zinc atom (not shown). The probable active site residues are found to be His 16, His 18, Asp 20, Phe 66, Gly 107, Met 156, His 236, Cys 262, Asp 294 and Asp 295.

Ramachandran plot for the predicted model of chicken ADA.

Normal endogenous activity of ADA in esophagus of chicken. Values are expressed as mean from five chicken at each point. Bars represent standard deviation. Asterisk (*) indicates statistically significant (p< 0.001) value as compared to day 1.

(a) i. Slot blot analysis of ADA from esophagus of chicken from day 1 and 10. (a) ii. Represents the total protein stained with India Ink as control. An equal amount (60 µg protein) of cytosol containing ADA was applied to each slot and processed for immunoblotting using human polyclonal ADA antibody. (b) i. Western blot analysis of ADA from esophagus of chicken from day 1 and 10. (b) ii. The India ink stained Western blots for a major GIT protein of ~42 kDa on nitrocellulose membrane. An equal amount (50 µg protein) of cytosol containing ADA was loaded in each lane and processed for immunoblotting using human polyclonal ADA antibody. (c) The relative (Rel.) intensity of the slot blots determined by using densitometric analysis (KDS-1 software).

Normal endogenous activity of ADA in crop of chicken. Values are expressed as mean from five chicken at each point. Bars represent standard deviation. Asterisk (*) indicates statistically significant (p< 0.001) value as compared to day 1.

(a) i. Slot blot analysis of ADA from crop of chicken from day 1 and 10. (a) ii. Represents the total protein stained with India Ink as control. An equal amount (60 µg protein) of cytosol containing ADA was applied to each slot and processed for immunoblotting using human polyclonal ADA antibody. (b) i. Western blot analysis of ADA from crop of chicken from day 1 and 10. (b) ii. The India ink stained Western blots for a major GIT protein of ~42 kDa on nitrocellulose membrane. An equal amount (50 µg protein) of cytosol containing ADA was loaded in each lane and processed for immunoblotting using human polyclonal ADA antibody. (c) The relative (Rel.) intensity of the slot blots determined by using densitometric analysis (KDS-1 software).

Normal endogenous activity of ADA in proventriculus of chicken. Values are expressed as mean from five chicken at each point. Bars represent standard deviation. Asterisks (*, #) indicate statistically significant (p< 0.001) value as compared to day 1 and 60, respectively.
Fig. 10: (a) i. Slot blot analysis of ADA from proventriculus of chicken from day 1 and 10. (a) ii. Represents the total protein stained with India Ink as control. An equal amount (60 μg protein) of cytosol containing ADA was applied to each slot and processed for immunoblotting using human polyclonal ADA antibody. (b) i. Western blot analysis of ADA from proventriculus of chicken from day 1 and 10. (b) ii. The India ink stained Western blots for a major GIT protein of ~42 kDa on nitrocellulose membrane. An equal amount (50 μg protein) of cytosol containing ADA was loaded in each lane and processed for immunoblotting using human polyclonal ADA antibody. (c) The relative (Rel.) intensity of the slot blots determined by using densitometric analysis (KDS-1 software).

Normal endogenous activity of ADA in small intestine of chicken. Values are expressed as mean from five chicken at each point. Bars represent standard deviation. Asterisk (*) indicates statistically significant (p< 0.001) value as compared to day 1.

Fig. 11: (a) i. Slot blot analysis of ADA from small intestine of chicken from day 1 and 10. (a) ii. Represents the total protein stained with India Ink as control. An equal amount (60 μg protein) of cytosol containing ADA was applied to each slot and processed for immunoblotting using human polyclonal ADA antibody. (b) i. Western blot analysis of ADA from small intestine of chicken from day 1 and 10. (b) ii. The India ink stained Western blots for a major GIT protein of ~42 kDa on nitrocellulose membrane. An equal amount (50 μg protein) of cytosol containing ADA was loaded in each lane and processed for immunoblotting using human polyclonal ADA antibody. (c) The relative (Rel.) intensity of the slot blots determined by using densitometric analysis (KDS-1 software).

Normal endogenous activity of ADA in spleen of chicken. Values are expressed as mean from five chicken at each point. Asterisks (*) indicate statistically significant (p< 0.001) values as compared to day 1 and 30, respectively.

Fig. 12: (a) i. Slot blot analysis of ADA from spleen of chicken from day 1 and 10. (a) ii. Represents the total protein stained with India Ink as control. An equal amount (60 μg protein) of cytosol containing ADA was applied to each slot and processed for immunoblotting using human polyclonal ADA antibody. (b) i. Western blot analysis of ADA from spleen of chicken from day 1 and 10. (b) ii. The India ink stained Western blots for a major GIT protein of ~42 kDa on nitrocellulose membrane. An equal amount (50 μg protein) of cytosol containing ADA was loaded in each lane and processed for immunoblotting using human polyclonal ADA antibody. (c) The relative (Rel.) intensity of the slot blots determined by using densitometric analysis (KDS-1 software).

Effect of corticosterone (Corti) on the activity of esophagus ADA. Values are expressed as mean from five chicken at each point. Bars represent standard deviation. Asterisks (*) indicate statistically significant (p< 0.001) value as compared to control.

Fig. 13: (a) i. Slot blot analysis of ADA from spleen of chicken from day 1 and 60. (a) ii. Represents the total protein stained with India Ink as control. An equal amount (60 μg protein) of cytosol containing ADA was applied to each slot and processed for immunoblotting using human polyclonal ADA antibody. (b) i. Western blot analysis of ADA from spleen of chicken from day 1 and 60. (b) ii. The India ink stained Western blots for a major GIT protein of ~42 kDa on nitrocellulose membrane. An equal amount (50 μg protein) of cytosol containing ADA was loaded in each lane and processed for immunoblotting using human polyclonal ADA antibody. (c) The relative (Rel.) intensity of the slot blots determined by using densitometric analysis (KDS-1 software).

Effect of corticosterone (Corti) on the activity of crop ADA. Values are expressed as mean from five chicken at each point. Bars represent standard deviation. Asterisks (*) indicate statistically significant (p< 0.001) value as compared to control.
Fig. 18: (a) i. Slot blot analysis of ADA from crop of chicken from day 10 and 60. (a) ii. Represents the total protein stained with India Ink as control. An equal amount (60 μg protein) of cytosol containing ADA was applied to each slot and processed for immunoblotting using human polyclonal ADA antibody. (b) i. Western blot analysis of ADA from crop of chicken from day 10 and 60. (b) ii. The India ink stained Western blots for a major GIT protein of ~42 kDa on nitrocellulose membrane. An equal amount (50 μg protein) of cytosol containing ADA was loaded in each lane and processed for immunoblotting using human polyclonal ADA antibody. (c) The relative (Rel.) intensity of the slot blots determined by densitometric analysis (KDS-1 software).

Effect of corticosterone (Corti) on the activity of proventriculus ADA. Values are expressed as mean from five chicken at each point. Bars represent standard deviation.

(a) i. Slot blot analysis of ADA from proventriculus of chicken from day 10 and 60. (a) ii. Represents the total protein stained with India Ink as control. An equal amount (60 μg protein) of cytosol containing ADA was applied to each slot and processed for immunoblotting using human polyclonal ADA antibody. (b) i. Western blot analysis of ADA from proventriculus of chicken from day 10 and 60. (b) ii. The India ink stained Western blots for a major GIT protein of ~42 kDa on nitrocellulose membrane. An equal amount (50 μg protein) of cytosol containing ADA was loaded in each lane and processed for immunoblotting using human polyclonal ADA antibody. (c) The relative (Rel.) intensity of the slot blots determined by densitometric analysis (KDS-1 software).

Effect of corticosterone (Corti) on the activity of small intestine ADA. Values are expressed as mean from five chicken at each point. Bars represent standard deviation. Asterisks (*) indicates statistically significant (p< 0.001) value as compared to control.

(a) i. Slot blot analysis of ADA from small intestine of chicken from day 10 and 60. (a) ii. Represents the total protein stained with India Ink as control. An equal amount (60 μg protein) of cytosol containing ADA was applied to each slot and processed for immunoblotting using human polyclonal ADA antibody. (b) i. Western blot analysis of ADA from small intestine of chicken from day 10 and 60. (b) ii. The India ink stained Western blots for a major GIT protein of ~42 kDa on nitrocellulose membrane. An equal amount (50 μg protein) of cytosol containing ADA was loaded in each lane and processed for immunoblotting using human polyclonal ADA antibody. (c) The relative (Rel.) intensity of the slot blots determined by densitometric analysis (KDS-1 software).

Effect of corticosterone (Corti) on the activity of spleen ADA. Values are expressed as mean from five chicken at each point. Bars represent standard deviation. Asterisks (*) indicate statistically significant (p< 0.001) value as compared to control.

(a) i. Slot blot analysis of ADA from spleen of chicken from day 10 and 60. (a) ii. Represents the total protein stained with India Ink as control. An equal amount (60 μg protein) of cytosol containing ADA was applied to each slot and processed for immunoblotting using human polyclonal ADA antibody. (b) i. Western blot analysis of ADA from spleen of chicken from day 10 and 60. (b) ii. The India ink stained Western blots for a major GIT protein of ~42 kDa on nitrocellulose membrane. An equal amount (50 μg protein) of cytosol containing ADA was loaded in each lane and processed for immunoblotting using human polyclonal ADA antibody. (c) The relative (Rel.) intensity of the slot blots determined by densitometric analysis (KDS-1 software).

Effect of Bt2cAMP on the activity of esophagus ADA. Values are expressed as mean from five chicken at each point. Bars represent standard deviation. Asterisks (*) indicate statistically significant (p< 0.001) value as compared to control.
Effect of Bt2cAMP on the activity of crop ADA. Values are expressed as mean from five chicken at each point. Bars represent standard deviation.

(a) i. Slot blot analysis of ADA from crop of chicken from day 10 and 60. (a) ii. Represents the total protein stained with India Ink as control. An equal amount (60 µg protein) of cytosol containing ADA was applied to each slot and processed for immunoblotting using human polyclonal ADA antibody. (b) i. Western blot analysis of ADA from crop of chicken from day 10 and 60. (b) ii. The India ink stained Western blots for a major GIT protein of ~42 kDa on nitrocellulose membrane. An equal amount (50 µg protein) of cytosol containing ADA was loaded in each lane and processed for immunoblotting using human polyclonal ADA antibody. (c) The relative (Rel.) intensity of the slot blots determined by densitometric analysis (KDS-1 software).

Effect of Bt2cAMP on the activity of proventriculus ADA. Values are expressed as mean from five chicken at each point. Bars represent standard deviation. Asterisks (*) indicate statistically significant ($p<0.001$) value as compared to control.

(a) i. Slot blot analysis of ADA from proventriculus of chicken from day 10 and 60. (a) ii. Represents the total protein stained with India Ink as control. An equal amount (60 µg protein) of cytosol containing ADA was applied to each slot and processed for immunoblotting using human polyclonal ADA antibody. (b) i. Western blot analysis of ADA from proventriculus of chicken from day 10 and 60. (b) ii. The India ink stained Western blots for a major GIT protein of ~42 kDa on nitrocellulose membrane. An equal amount (50 µg protein) of cytosol containing ADA was loaded in each lane and processed for immunoblotting using human polyclonal ADA antibody. (c) The relative (Rel.) intensity of the slot blots determined by densitometric analysis (KDS-1 software).

Effect of Bt2cAMP on the activity of small intestine ADA. Values are expressed as mean from five chicken at each point. Bars represent standard deviation. Asterisks (*) indicate statistically significant ($p<0.001$) value as compared to control.

(a) i. Slot blot analysis of ADA from small intestine of chicken from day 10 and 60. (a) ii. Represents the total protein stained with India Ink as control. An equal amount (60 µg protein) of cytosol containing ADA was applied to each slot and processed for immunoblotting using human polyclonal ADA antibody. (b) i. Western blot analysis of ADA from small intestine of chicken from day 10 and 60. (b) ii. The India ink stained Western blots for a major GIT protein of ~42 kDa on nitrocellulose membrane. An equal amount (50 µg protein) of cytosol containing ADA was loaded in each lane and processed for immunoblotting using human polyclonal ADA antibody. (c) The relative (Rel.) intensity of the slot blots determined by densitometric analysis (KDS-1 software).

Effect of Bt2cAMP on the activity of spleen ADA. Values are expressed as mean from five chicken at each point. Bars represent standard deviation. Asterisk (*) indicates statistically significant ($p<0.001$) value as compared to control.
(a) i. Slot blot analysis of ADA from spleen of chicken from day 10 and 60. (a) ii. Represents the total protein stained with India Ink as control. An equal amount (60 µg protein) of cytosol containing ADA was applied to each slot and processed for immunoblotting using human polyclonal ADA antibody. (b) i. Western blot analysis of ADA from spleen of chicken from day 10 and 60. (b) ii. The India Ink stained Western blots for a major GIT protein of ~42 kDa on nitrocellulose membrane. An equal amount (50 µg protein) of cytosol containing ADA was loaded in each lane and processed for immunoblotting using human polyclonal ADA antibody. (c) The relative (Rel.) intensity of the slot blots determined by densitometric analysis (KDS-1 software).

Effect of T3 on the activity of esophagus ADA. Values are expressed as mean from five chicken at each point. Bars represent standard deviation.

(a) i. Slot blot analysis of ADA from esophagus of chicken from day 10 and 60. (a) ii. Represents the total protein stained with India Ink as control. An equal amount (60 µg protein) of cytosol containing ADA was applied to each slot and processed for immunoblotting using human polyclonal ADA antibody. (b) i. Western blot analysis of ADA from esophagus of chicken from day 10 and 60. (b) ii. The India Ink stained Western blots for a major GIT protein of ~42 kDa on nitrocellulose membrane. An equal amount (50 µg protein) of cytosol containing ADA was loaded in each lane and processed for immunoblotting using human polyclonal ADA antibody. (c) The relative (Rel.) intensity of the slot blots determined by densitometric analysis (KDS-1 software).

Effect of T3 on the activity of crop ADA. Values are expressed as mean from five chicken at each point. Bars represent standard deviation.

(a) i. Slot blot analysis of ADA from crop of chicken from day 10 and 60. (a) ii. Represents the total protein stained with India Ink as control. An equal amount (60 µg protein) of cytosol containing ADA was applied to each slot and processed for immunoblotting using human polyclonal ADA antibody. (b) i. Western blot analysis of ADA from crop of chicken from day 10 and 60. (b) ii. The India Ink stained Western blots for a major GIT protein of ~42 kDa on nitrocellulose membrane. An equal amount (50 µg protein) of cytosol containing ADA was loaded in each lane and processed for immunoblotting using human polyclonal ADA antibody. (c) The relative (Rel.) intensity of the slot blots determined by densitometric analysis (KDS-1 software).

Effect of T3 on the activity of proventriculus ADA. Values are expressed as mean from five chicken at each point. Bars represent standard deviation.

(a) i. Slot blot analysis of ADA from proventriculus of chicken from day 10 and 60. (a) ii. Represents the total protein stained with India Ink as control. An equal amount (60 µg protein) of cytosol containing ADA was applied to each slot and processed for immunoblotting using human polyclonal ADA antibody. (b) i. Western blot analysis of ADA from proventriculus of chicken from day 10 and 60. (b) ii. The India Ink stained Western blots for a major GIT protein of ~42 kDa on nitrocellulose membrane. An equal amount (50 µg protein) of cytosol containing ADA was loaded in each lane and processed for immunoblotting using human polyclonal ADA antibody. (c) The relative (Rel.) intensity of the slot blots determined by densitometric analysis (KDS-1 software).

Effect of T3 on the activity of small intestine ADA. Values are expressed as mean from five chicken at each point. Bars represent standard deviation.
Fig. 42: (a) i. Slot blot analysis of ADA from small intestine of chicken from day 10 and 60. (a) ii. Represents the total protein stained with India Ink as control. An equal amount (60 µg protein) of cytosol containing ADA was applied to each slot and processed for immunoblotting using human polyclonal ADA antibody. (b) i. Western blot analysis of ADA from small intestine of chicken from day 10 and 60. (b) ii. The India ink stained Western blots for a major GIT protein of ~42 kDa on nitrocellulose membrane. An equal amount (50 µg protein) of cytosol containing ADA was loaded in each lane and processed for immunoblotting using human polyclonal ADA antibody. (c) The relative (Rel.) intensity of the slot blots determined by densitometric analysis (KDS-1 software).

Fig. 43: Effect of T3 on the activity of spleen ADA. Values are expressed as mean from five chicken at each point. Bars represent standard deviation.

(a) i. Slot blot analysis of ADA from spleen of chicken from day 10 and 60. (a) ii. Represents the total protein stained with India Ink as control. An equal amount (60 µg protein) of cytosol containing ADA was applied to each slot and processed for immunoblotting using human polyclonal ADA antibody. (b) i. Western blot analysis of ADA from spleen of chicken from day 10 and 60. (b) ii. The India ink stained Western blots for a major GIT protein of ~42 kDa on nitrocellulose membrane. An equal amount (50 µg protein) of cytosol containing ADA was loaded in each lane and processed for immunoblotting using human polyclonal ADA antibody. (c) The relative (Rel.) intensity of the slot blots determined by densitometric analysis (KDS-1 software).

Fig. 44: Effect of testosterone (Testos) on the activity of esophagus ADA. Values are expressed as mean from five chicken at each point. Bars represent standard deviation.

(a) i. Slot blot analysis of ADA from esophagus of chicken from day 10 and 60. (a) ii. Represents the total protein stained with India Ink as control. An equal amount (60 µg protein) of cytosol containing ADA was applied to each slot and processed for immunoblotting using human polyclonal ADA antibody. (b) i. Western blot analysis of ADA from esophagus of chicken from day 10 and 60. (b) ii. The India ink stained Western blots for a major GIT protein of ~42 kDa on nitrocellulose membrane. An equal amount (50 µg protein) of cytosol containing ADA was loaded in each lane and processed for immunoblotting using human polyclonal ADA antibody. (c) The relative (Rel.) intensity of the slot blots determined by densitometric analysis (KDS-1 software).

Fig. 45: Effect of testosterone (Testos) on the activity of crop ADA. Values are expressed as mean from five chicken at each point. Bars represent standard deviation.

(a) i. Slot blot analysis of ADA from crop of chicken from day 10 and 60. (a) ii. Represents the total protein stained with India Ink as control. An equal amount (60 µg protein) of cytosol containing ADA was applied to each slot and processed for immunoblotting using human polyclonal ADA antibody. (b) i. Western blot analysis of ADA from crop of chicken from day 10 and 60. (b) ii. The India ink stained Western blots for a major GIT protein of ~42 kDa on nitrocellulose membrane. An equal amount (50 µg protein) of cytosol containing ADA was loaded in each lane and processed for immunoblotting using human polyclonal ADA antibody. (c) The relative (Rel.) intensity of the slot blots determined by densitometric analysis (KDS-1 software).

Fig. 46: Effect of testosterone (Testos) on the activity of proventriculus ADA. Values are expressed as mean from five chicken at each point. Bars represent standard deviation.

(a) i. Slot blot analysis of ADA from proventriculus of chicken from day 10 and 60. (a) ii. Represents the total protein stained with India Ink as control. An equal amount (60 µg protein) of cytosol containing ADA was applied to each slot and processed for immunoblotting using human polyclonal ADA antibody. (b) i. Western blot analysis of ADA from proventriculus of chicken from day 10 and 60. (b) ii. The India ink stained Western blots for a major GIT protein of ~42 kDa on nitrocellulose membrane. An equal amount (50 µg protein) of cytosol containing ADA was loaded in each lane and processed for immunoblotting using human polyclonal ADA antibody. (c) The relative (Rel.) intensity of the slot blots determined by densitometric analysis (KDS-1 software).
(a) i. Slot blot analysis of ADA from proventriculus of chicken from day 10 and 60. (a) ii. Represents the total protein stained with India Ink as control. An equal amount (60 μg protein) of cytosol containing ADA was applied to each slot and processed for immunoblotting using human polyclonal ADA antibody. (b) i. Western blot analysis of ADA from proventriculus of chicken from day 10 and 60. (b) ii. The India ink stained Western blots for a major GIT protein of ~42 kDa on nitrocellulose membrane. An equal amount (50 μg protein) of cytosol containing ADA was loaded in each lane and processed for immunoblotting using human polyclonal ADA antibody. (c) The relative (Rel.) intensity of the slot blots determined by densitometric analysis (KDS-I software).

**Fig. 50:**

Effect of testosterone (Testos) on the activity of small intestine ADA. Values are expressed as mean from five chicken at each point. Bars represent standard deviation.

(a) i. Slot blot analysis of ADA from small intestine of chicken from day 10 and 60. (a) ii. Represents the total protein stained with India Ink as control. An equal amount (60 μg protein) of cytosol containing ADA was applied to each slot and processed for immunoblotting using human polyclonal ADA antibody. (b) i. Western blot analysis of ADA from small intestine of chicken from day 10 and 60. (b) ii. The India ink stained Western blots for a major GIT protein of ~42 kDa on nitrocellulose membrane. An equal amount (50 μg protein) of cytosol containing ADA was loaded in each lane and processed for immunoblotting using human polyclonal ADA antibody. (c) The relative (Rel.) intensity of the slot blots determined by densitometric analysis (KDS-I software).

**Fig. 52:**

Effect of testosterone (Testos) on the activity of spleen ADA. Values are expressed as mean from five chicken at each point. Bars represent standard deviation.

(a) i. Slot blot analysis of ADA from spleen of chicken from day 10 and 60. (a) ii. Represents the total protein stained with India Ink as control. An equal amount (60 μg protein) of cytosol containing ADA was applied to each slot and processed for immunoblotting using human polyclonal ADA antibody. (b) i. Western blot analysis of ADA from spleen of chicken from day 10 and 60. (b) ii. The India ink stained Western blots for a major GIT protein of ~42 kDa on nitrocellulose membrane. An equal amount (50 μg protein) of cytosol containing ADA was loaded in each lane and processed for immunoblotting using human polyclonal ADA antibody. (c) The relative (Rel.) intensity of the slot blots determined by densitometric analysis (KDS-I software).

**Fig. 53:**

**Immunoprecipitation:** Cross reactivity of chicken ADA with human anti-ADA antibody

**Fig. 55:**

Elution profile of intestinal ADA from 1-day old chicken through Sephadex G-100. Fractions were monitored at 280 nm for proteins and assayed for ADA activity. The dark horizontal line indicates the fractions pooled for further studies.

**Fig. 56:**

Elution profile of intestinal ADA from 1-day old chicken through DEAE-cellulose ion exchanger column. Fractions were monitored at 280 nm for proteins and assayed for ADA activity. The inclined and horizontal lines indicate the linear gradient of sodium chloride from 0-0.4 M and the fractions pooled for further studies, respectively.

**Fig. 57:**

Elution profile of intestinal ADA from 90-day old chicken through Sephadex G-100. Fractions were monitored at 280 nm for proteins and assayed for ADA activity. The dark horizontal line indicates the fractions pooled for further studies.
Elution profile of intestinal ADA from 90-day old chicken through DEAE-cellulose ion exchanger column. Fractions were monitored at 280 nm for proteins and assayed for ADA activity. The inclined and horizontal lines indicate the linear gradient of sodium chloride from 0-0.4 M and the fractions pooled for further studies, respectively.

Native polyacrylamide gel electrophoresis of purified ADA from intestine of 1-day (lane 1) and 90-day (lane 2) old chicken.

SDS-Polyacrylamide gel electrophoresis of purified ADA from intestine of 1-day (lane 2) and 90-day (lane 3) old chicken. The molecular weight markers are exhibited in lane 1. The standard molecular weight markers are Biorad Precision Plus Protein™ All Blue Standards.

Western blot of purified intestinal ADA from immature (lane 1) and mature (lane 2) chicken

Log molecular weight (M) versus $V_e/V_0$ using Sephadex G-100 column for molecular weight determination of purified ADA from 1- and 90-day old intestine of chicken. The standard molecular weight markers were: 1. Cytochrome c (12.4 kDa) 2. Carbonic anhydrase (29 kDa) 3. Bovine serum albumin (66 kDa) 4. Alcohol dehydrogenase (150 kDa) and 5. β-amylase (200 kDa)

Log molecular weight versus $R_m$ (using SDS-PAGE) for molecular weight determination of purified ADA from 1- and 90-day old intestine of chicken. The standard molecular weight markers were the same as given in figure 61.

Michaelis-Menten plot for purified intestinal ADA of immature (1-day) chicken using various concentrations of adenosine. Inset shows the Lineweaver-Burk plot. Data were computed and plotted in enzfitter programme (Sigma).

Michaelis-Menten plot for purified intestinal ADA of mature (90-day) chicken using various concentrations of adenosine. Inset shows the Lineweaver-Burk plot. Data were computed and plotted in enzfitter programme (Sigma).

Michaelis-Menten plot for purified intestinal ADA of immature (1-day) chicken using various concentrations of deoxyadenosine. Inset shows the Lineweaver-Burk plot. Data were computed and plotted in enzfitter programme (Sigma).

Michaelis-Menten plot for purified intestinal ADA of mature (90-day) chicken using various concentrations of deoxyadenosine. Inset shows the Lineweaver-Burk plot. Data were computed and plotted in enzfitter programme (Sigma).

Dixon’s plot for purine riboside inhibition of immature (1-day) chicken intestinal ADA. Data were computed and plotted using enzfitter programme (Sigma).

Dixon’s plot for purine riboside inhibition of mature (90-day) chicken intestinal ADA. Data were computed and plotted using enzfitter programme (Sigma).

$\text{pH}$ stability profile for both immature (1-day) and mature (90-day) purified chicken intestinal ADA. Results are expressed as percentage of activity, taking the $\text{pH}$ at 5.5 as 100%.

Temperature stability profile for both immature (1-day) and mature (90-day) purified chicken intestinal ADA. Results are expressed as percentage of activity, taking the activity of ADA at 25°C as 100%.

Inactivation profile for both immature (1-day) and mature (90-day) purified chicken intestinal ADA at various concentrations of urea. Results are expressed as percentage of activity, taking no urea as 100%.
Effects of various modulators on activity of purified ADA from the small intestine of immature (1-day) mature (90-day) chicken. DTT, ME, DTNB, Ca$^{2+}$, Mg$^{2+}$ and Hg$^{2+}$ indicate dithiothreitol, β-mercaptoethanol, 5, 5'-dithiobis-(2-nitrobenzoic acid), calcium, magnesium and mercury respectively. Results are expressed as percentage taking no modulators as 100%.