

# Anti-influenza virus activity of EGCg

Virus	EC50, ppm (Effective conc. for 50% plaque reduction)			
	① Virus + EGCg → Cells	② Virus + Solvent → Cells	③ EGCg + Cells → Virus	④ Virus + Cells → EGCg
<b><u>Influenza virus type A</u></b>				
Bangkok/93/03(H1N1)	1.41 ± 0.17	>30	>30	19.3 ± 1.8
PR8/8/34(H1N1)	2.19 ± 0.09	>30	>30	>30
Aichi/2/68(H3N2)	2.76 ± 0.23	>30	>30	22.9 ± 1.4
<b><u>Influenza virus type B</u></b>				
Singapore	0.93 ± 0.35	>30	>30	11.1 ± 1.6

CC50 value (cytotoxic conc. for 50% reduction of cell growth) of EGCg was 85.6 ppm.

## Summary of [Methods](#) and [Results](#)

### ① EGCg-treated virus was adsorbed to cells.

EGCg was significantly effective in inhibiting the adsorption and/or invasion of influenza virus type A and B to cells. EC50 values of EGCg were 31 to 92-folds lower than the CC50 value.

### ② Solvent-treated virus was adsorbed to cells. Components of solvent except EGCg did not show any anti-influenza virus activity

### ③ Virus was adsorbed and infected to EGCg-treated cells.

EGCg was not effective in interfering with virus adsorption and/or invasion in EGCg-pretreated cells.

### ④ Virus-adsorbed and infected cells were incubated in the presence of EGCg.

Progeny virus probably contacted with EGCg contained in medium and the adsorption and/or invasion into cells were interrupted.

## Conclusion

Direct contact of virus particles and EGCg is important in inhibiting virus infection to cells.

# Inactivation of HCoV-229E by EGCg

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## Antivirus activity and cytotoxicity of EGCg

EC <sub>50</sub> (HCoV-229E)	Reduction of infectivity at 10ppm	CC <sub>50</sub>
0.54 ppm (Exp ①)	55% (Exp ①)	67.53 ppm (Vero cells)
1.66 ppm (Exp ②)	82% (Exp ②)	65.34 ppm (MRC-5 cells)
1.11 ppm (Exp ③)	88% (Exp ③)	85.61 ppm (MDCK cells)

Data of Infection study group at National Univ.

EGCg showed direct inactivation activity of virus particles and inhibitory activity of virus-adsorption to cells, resulting in inhibition of HCoV-229E infection.

EC50 values are 0.5 to 2 ppm which are very low concentrations without cytotoxicity.