

Inactivation of HCoV-229E · SARS-CoV-2 by EGCg

Antivirus activity and cytotoxicity of EGCg

EC ₅₀ (HCoV-229E)	Reduction of infectivity at 10ppm	CC ₅₀
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 Tokyo 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.

In this study, EGCg is expected to show antiviral effect against SARS-CoV-2 as well because of the structural similarity between HCoV-229E and SARS-CoV-2.