Immuno graphene field-effect transistor-based cortisol bioelectronics using a novel cortisol antibody

Kyung Ho Kim[a], Jong-Tae Kim[b], Sung Eun Seo[a], Hee Gu Lee[b,*], Oh Seok Kwon[a,c,d,**]

[a] SKKU Advanced Institute of Nanotechnology (SAINT), Sungkyunkwan University, Suwon, 16419, Republic of Korea

[b] Immunotherapy Research Center, Korea Research Institute of Bioscience and Biotechnology (KRIBB), Daejeon 34141, Republic of Korea

[c] Department of Nano Science and Technology, Sungkyunkwan University, Suwon, 16419, Republic of Korea

[d] Department of Nano Engineering, Sungkyunkwan University (SKKU), Suwon, 16419, Republic of Korea

[*] Corresponding author. Immunotherapy Research Center, Korea Research Institute of Bioscience and Biotechnology (KRIBB), Daejeon 34141, Republic of Korea

[**] Corresponding author. SKKU Advanced Institute of Nanotechnology (SAINT), Sungkyunkwan University, Suwon, 16419, Republic of Korea

E-mail address: hglee@kribb.re.kr (H. G. Lee), oskwon79@skku.edu (O. S. Kwon)

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Table S1. The performance comparison of various FET-based bioelectronics for cortisol detection

Channel materials	Linker	Probe	Real-time	Environments	LOD (pM)	Ref.
In_2O_3	APTES	Aptamer	Possible	Sweat	1×10^{-12}	[1]
Polypyrrole Nanotube	None	Antibody	Possible	PBS buffer	$2.7x10^{-10}$	[2]
SWCNTs AuNPs	None	Antibody	Impossible	Artificial sweat	2.2×10^{-1}	[3]
MoS_2	APTES	Aptamer	Impossible	Serum	2.8×10^{3}	[4]
Graphene nanoplatelets	PANHS	Antibody	Impossible	Synthetic sweat	2.3×10^{1}	[5]
Graphene	PANHS	Aptamer	Impossible	PBS buffer	$1x10^{3}$	[6]
Graphene	None	Antibody	Impossible	eyes	2.7×10^{1}	[7]
Graphene	OPE	Antibody	Possible	Artificial sweat	$5x10^{-1}$	**In this work**

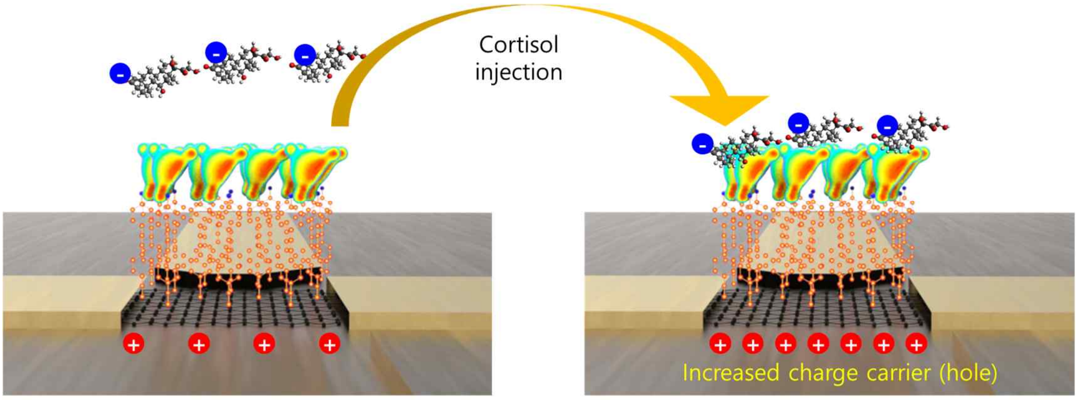

Figure S1. Schematic diagram of the charge carrier density change depending on the interaction between antibody and cortisol.

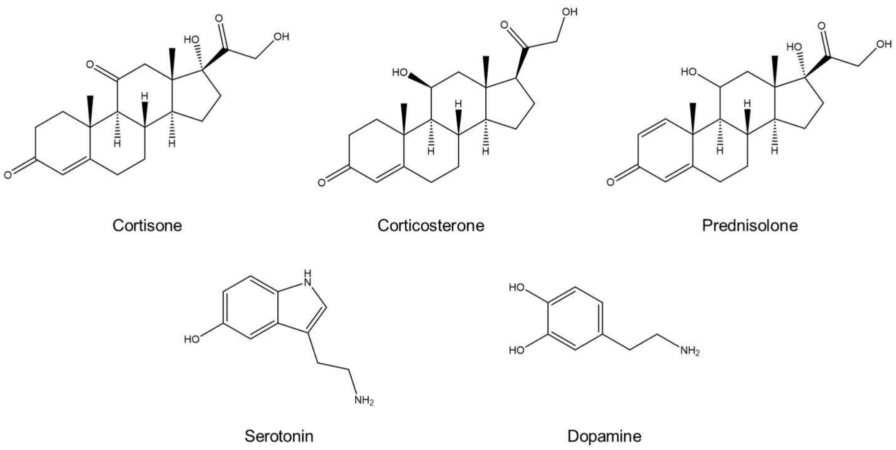

Figure S2. The structures of the used interference materials, Cortisone, Corticosterone, Prednisolone, Serotonin, and Dopamine.

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