

## Supporting information

# Hispidulin alleviates mast cell-mediated allergic airway inflammation through FcεR1 and Nrf2/HO-1 signaling pathway

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**Table S1.** The primer sequences for the qPCR

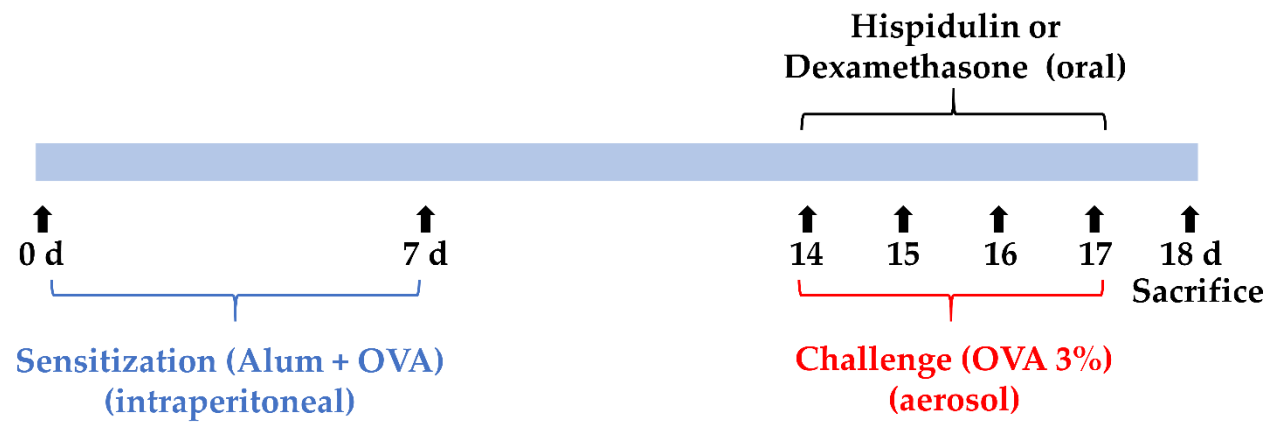
RAT primer				
No.	Name	Source	Forward(Sense)	Reverse(Antisense)
1	Rat IL-4	RAT	ACC TTG CTG TCA CCC TGT TC	TTG TGA GCG TGG ACT CAT TC
2	Rat IL-6	RAT	TGT GCA ATG GCA ATT CTG AT	GAG CAT TGG AAG TTG GGG TA
3	Rat IL-13	RAT	CCA CAG GAC CCA GAG GAT ATT GA	TAG CGG AAA AGT TGC TTG GAG TAA
4	Rat TNF- $\alpha$	RAT	TCC CAA ATG GGC TCC CTC TC	AAA TGG CAA ACC GGC TGA CG
5	Rat SOD2	RAT	AGC TGC ACC ACA GCA AGC AC	TCC ACC ACC CTT AGG GCT CA
6	Rat CAT	RAT	TCC GGG ATC TTT TTA ACG CCA TTG	TCG AGC ACG GTA GGG ACA GTT CAC
7	Rat GPx	RAT	CGG TTT CCC GTG CAA TCA GT	ACA CCG GGG ACC AAA TGA TG
8	Rat $\beta$ -actin	RAT	GAA GCT GTG CTA TGT TGC CCT AGA	GTA CTC CTG CTT GCT GAT CCA CAT
Mouse primer				
No.	Name	Source	Forward(Sense)	Reverse(Antisense)
1	M IL-1 $\beta$	Mouse	GGC CGA CTT CAC TGT ACA AC	CCT TCA CAG AGA GGG TCA CAG
2	M IL-4	Mouse	TCT CGA ATG TAC CAG GAG CCA TAT C	AGC ACC TTG GAA GCC CTA CAG A
3	M IL-5	Mouse	ATG GAG ATT CCC ATG AGC AC	AGC CCC TGA AAG ATT TCT CC
4	M IL-6	Mouse	CCA CTT CAC AAG TCG GAG GCT TA	GCA AGT GCA TCA TCG TTG TTC ATA C
5	M IL-10	Mouse	TGG CCC AGA AAT CAA GGA GC	CAG CAG ACT CAA TAC ACA CT
6	M IL-13	Mouse	CCT CTG ACC CTT AAG GAG CTT	ATG TTG GTC AGG GAA TCC AG
7	M TNF- $\alpha$	Mouse	AAG CCT GTA GCC CAC GTC GTA	GGC ACC ACT AGT TGG TTG TCT TTG
8	M CCL2	Mouse	CAG CAG GTG TCC CAA AGA A	CTT GAG GTG GTT GTG GAA AA
9	M CCL3	Mouse	TCT GCA ACC AAG TCT TCT CAG	GAA GAG TCC CTC GAT GTG GAT A
10	M CXCL8	Mouse	CCA CCT TGA GGC AAG ATC CC	CCC AGA ATC AAC GCA AAG CC
11	M Tpsg1	Mouse	GGT CAC ACT GTC TCC CCA CT	GCA TCC CAG GGT AGA AGT CA
12	M c-Kit	Mouse	AGC AAT GGC CTC ACG AGT TCT A	CCA GGA AAA GTT TGG CAG GAT
13	M $\beta$ -Actin	Mouse	TAG ACT TCG AGC AGG AGA TG	TTG ATC TTC ATG GTG CTA GG

**Table S2.** The list of antibodies

<b>Antibody</b>				
Protein	Type of antibody	Cat.	Dilution	Supplier
Phospho-Akt (Ser473)	Rabbit polyclonal	9271	1/1000	CST
Phospho-IKK $\alpha$ $\beta$ (Ser176/180)	Rabbit monoclonal	2697	1/1000	CST
Phospho-Lyn (Tyr507)	Rabbit polyclonal	2731	1/1000	CST
Phospho-PI3K p85	Rabbit polyclonal	4228	1/1000	CST
Phospho-PLC- $\gamma$ (Tyr783)	Rabbit monoclonal	2821	1/1000	CST
$\beta$ -Actin	Rabbit monoclonal	4967	1/1000	CST
Akt	Rabbit polyclonal	9272	1/1000	CST
HO-1	Rabbit monoclonal	5853	1/1000	CST
I $\kappa$ B $\alpha$	Rabbit monoclonal	4812	1/1000	CST
Lamin B1	Rabbit monoclonal	12586	1/1000	CST
Lyn	Rabbit polyclonal	2732	1/1000	CST
Nrf2	Rabbit monoclonal	12721	1/1000	CST
PI3K p85	Rabbit polyclonal	4292	1/1000	CST
PLC- $\gamma$	Rabbit monoclonal	2822	1/1000	CST

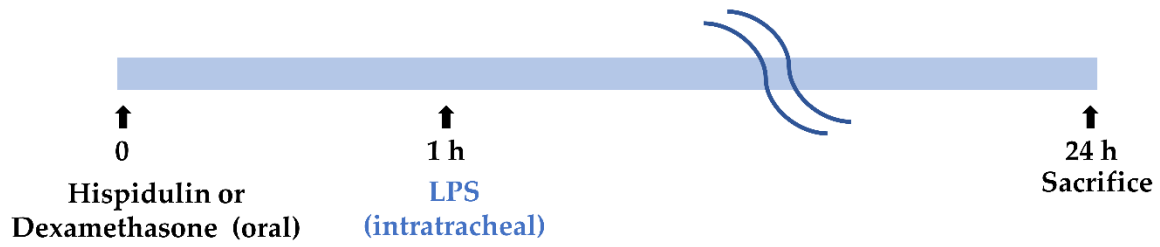
**Figure S1.** OVA-induced allergic asthma model

❖ **OVA-induced asthma model**

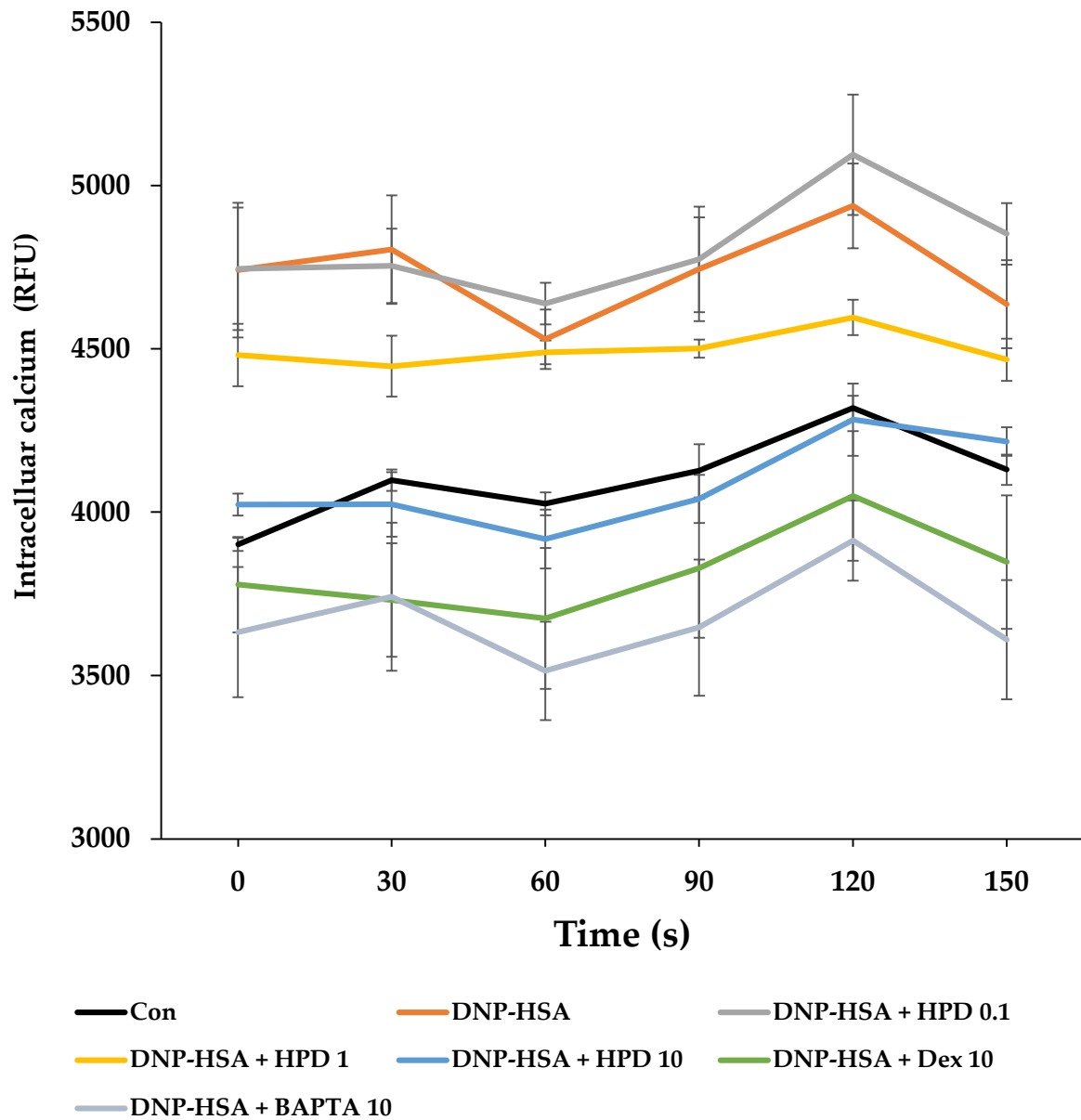


**Figure S2. LPS-induced acute lung injury model**

**❖ LPS-induced acute lung injury model**

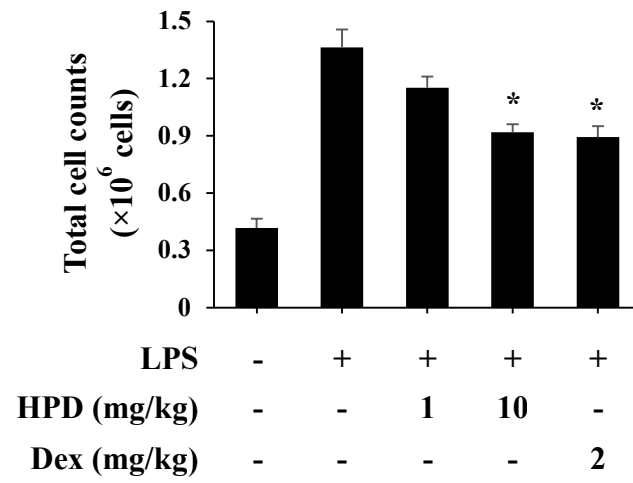


**Figure S3.** Effects of HPD on continuous calcium measurements



The intracellular calcium level was kinetically measured for total 150 s, every 30 s, 5 times. Values are mean  $\pm$  SEM (n=5). \* $p < 0.05$  relative to DNP-HSA group.

**Figure S4.** Effects of HPD on cellular infiltration into BALF



The variation of total cell counts in BALF of LPS-induced ALI model. Values are mean  $\pm$  SEM (n=5). \* $p < 0.05$  relative to LPS group.