

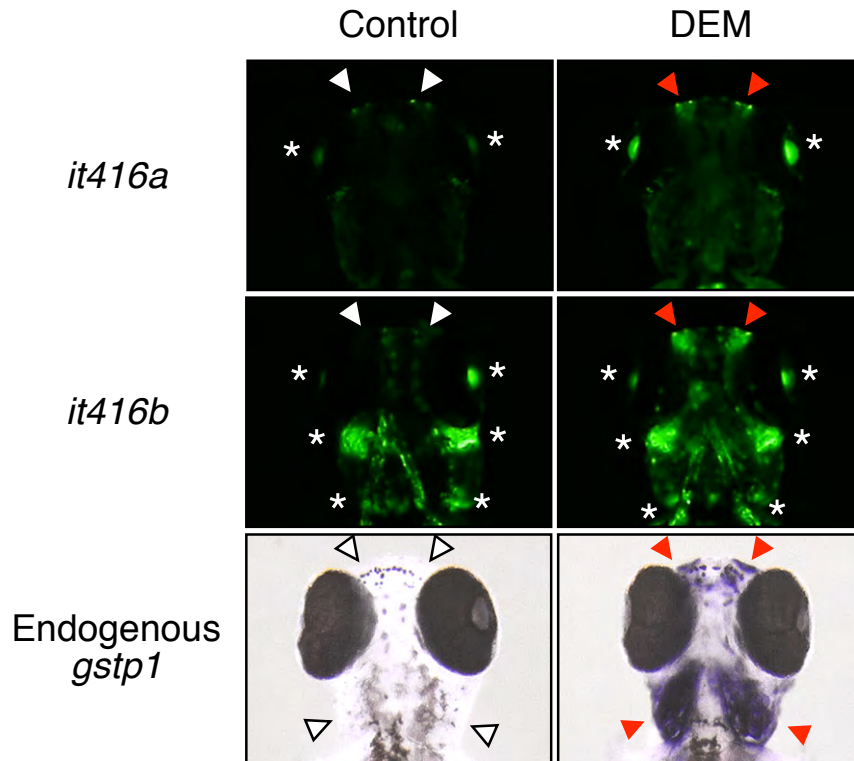
**Table S1** Generation of stable transgenic lines harboring p3.5gstp1GFP or pT3.5gstp1GFP constructs. N.D. denotes not determined.

Injected constructs	Tested founders	Transgene positives in F1 larvae	GFP positives in F1 larvae	
			Basal	Inducible
p3.5gstp1GFP	79	3	0	0
pT3.5gstp1GFP	104	N.D.	12	2*

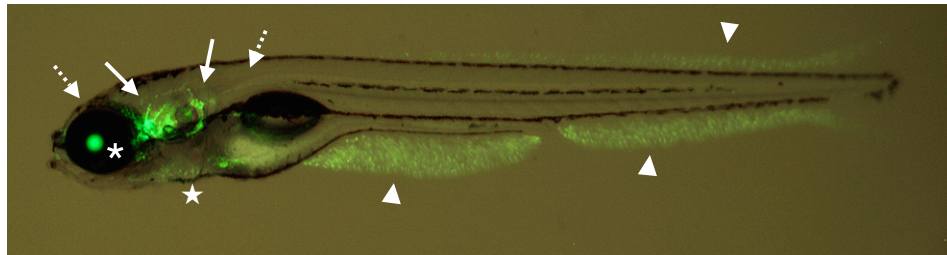
\**it416a* and *it416b*

**Table S2 Peptides identified by MALDI-TOF MS from mouse Keap1 following treatment with OA-NO<sub>2</sub>**

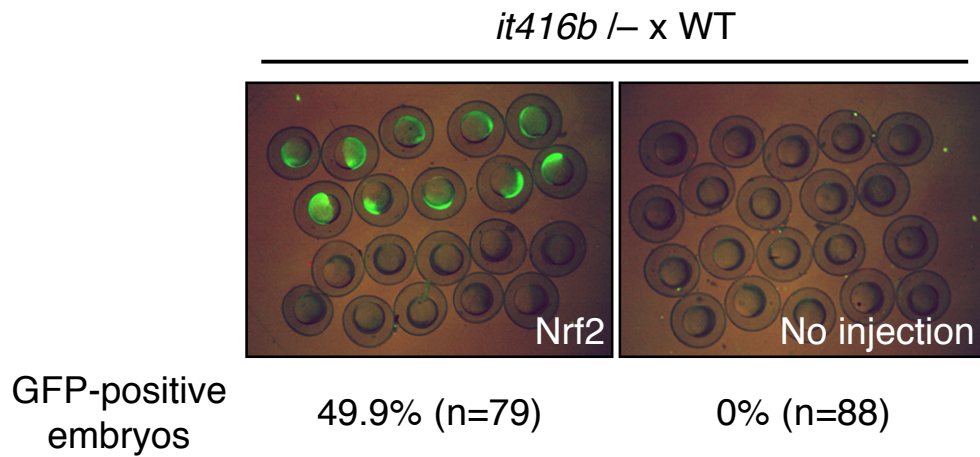
Position	Peptide sequence	Calculated mass	MS	Peak no.
255-260	YDCPQR	781.3	781.4	
273-279	CHALTPR	797.4	797.5	
109-116	AMFTNGLR	909.4	909.5	
355-362	LADLQVPR	911.5	911.6	
461-470	IGVGVAVLNR	997.6	997.7	
280-287	FLQTQLQK	1005.6	1005.6	
262-269	FYVQALLR	1009.6	1009.6	
288-296	CEILQADAR	1018.5	1018.6	
499-507	MITPMNTIR	1076.5	1076.6	
555-565	SALGITVHQGK	1110.6	1110.7	
98-108	VVLASSSPVFK	1133.6	1133.7	
460-470	RIGVGVAVLR	1153.7	1153.8	
327-336	LIYTAGGYFR	1160.6	1160.7	
62-71	QAFGVMNELR	1164.6	1164.6	
40-50	AEVTPSQDGNR	1173.5	1173.6	
13-22	SSQFLPLWSK	1192.6	1192.7	
602-614	SGVGVAVTMEPCR	1305.6	1305.7	
51-61	TFSYTLEDHTK	1341.6	1341.7	
484-494	LNSAECYYPER	1344.6	1344.6	
471-483	LLYAVGGFDGTNR	1382.7	1382.7	
448-459	DEWHLVAPMLTR	1467.7	1467.8	
72-84	LSQQLCDVTLQVK	1474.8	1474.8	
205-216	EYIYMHFGEVAK	1486.7	1486.7	
85-97	YEDIPAAQFMAHK	1520.7	1520.8	
136-150	LIEFAYTASISVGEK	1627.8	1627.9	
363-380	SGLAGCVVGGLLYAVGGR	1648.9	1648.9	
117-131	EQGMEVVSIEGIHPK	1652.8	1652.9	
241-254	CESEVFHACIDWVK	1665.7	1665.8	
203-216	AREYIYMHFGEVAK	1713.8	1713.9	
537-551	YDVETETWTFVAPMR	1844.8	1844.9	
280-296	FLQTQLQKCEILQADAR	2005.0	2005.1	
337-354	QSLSYLEAYNPSNGSWLR	2085.0	2085.0	
151-169	CYVHVMNGAVMYQIDSVVR	2134.1	2134.1	
217-234	QEEFFNLSHCQLATLISR	2136.1	2136.1	
443-459	YEPERDEWHLVAPMLTR	2142.0	2142.1	
299-320	DYLVQIFQELTLHKPTQAVPCR	2599.4	2599.4	
416-442	IGVGVIDGHIYAVGGSHGCIHHSSVER	2756.4	2756.4	
297-320	CKDYLVQIFQELTLHKPTQAVPCR	2830.5	2830.5	
508-536	SGAGVCVLHCIYAAGGYDGDQQLNSVER	2996.4	2996.5	
<b>273-279</b>	<b>CHALTPR + OA-NO<sub>2</sub></b>	<b>1124.8</b>	<b>1124.8</b>	<b>P-1</b>
<b>602-614</b>	<b>SGVGVAVTMEPCR + OA-NO<sub>2</sub></b>	<b>1632.9</b>	<b>1632.7</b>	<b>P-2</b>
<b>484-494</b>	<b>LNSAECYYPER + OA-NO<sub>2</sub></b>	<b>1671.9</b>	<b>1671.7</b>	<b>P-3</b>
<b>72-84</b>	<b>LSQQLCDVTLQVK + OA-NO<sub>2</sub></b>	<b>1802.2</b>	<b>1802.1</b>	<b>P-4</b>
<b>363-380</b>	<b>SGLAGCVVGGLLYAVGGR + OA-NO<sub>2</sub></b>	<b>1976.2</b>	<b>1976.2</b>	<b>P-5</b>
<b>217-234</b>	<b>QEEFFNLSHCQLATLISR + OA-NO<sub>2</sub></b>	<b>2463.4</b>	<b>2463.3</b>	<b>P-6</b>



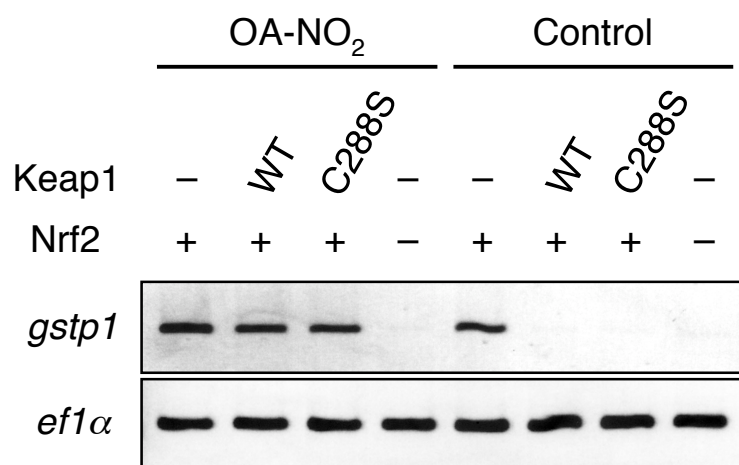
**Figure S1** DEM-induced GFP expression in stable transgenic lines. Ventral views. GFP expression in *Tg(-3.5gstp1:GFP)it416a* and *Tg(-3.5gstp1:GFP)it416b* larvae at 4 dpf with or without 100  $\mu$ M DEM treatment for 9 hours. Arrowheads indicate GFP induction in the olfactory regions and asterisks denote constitutive GFP expression in various larval regions. Lower panels show endogenous *gstp1* expression analyzed by *in situ* hybridization at the same conditions.



**Figure S2** Constitutive GFP expression in *Tg(-3.5gstp1:GFP)it416b* larvae at 6 dpf. Lateral view. GFP induction in the lens (asterisk), fins (arrowheads), ears (arrows), lateral lines (dotted arrows) and pericardium (star) was observed. It should be noted that the expression in all of these tissues, except for the lateral lines, was not observed for endogenous *gstp1*.



**Figure S3** Nrf2-induced GFP expression in *Tg(-3.5gstp1:GFP)it416b* embryos.. Embryos obtained from heterozygous *Tg(-3.5gstp1:GFP)it416b* males and non-transgenic wild-type females were injected with Nrf2 mRNA. Parentheses indicate the numbers of tested embryos. It must be noted that half of the injected embryos, which were expected to possess GFP genes, were GFP positive.



**Figure S4** The effects of the C288S mutation in Keap1 on the OA-NO<sub>2</sub> response. The endogenous *gstp1* expression was analyzed by an RT-PCR analysis. Embryos co-injected with wild-type (WT) or C288S Keap1 mRNA and Nrf2 mRNA were treated with 2.5 μM OA-NO<sub>2</sub> for 6 hours.

## Figure Legends for Supplemental Movies

**Movie S1** Real-time monitoring of DEM-induced GFP expression in *Tg(-3.5gstp1:GFP)it416b* larvae. GFP induction by 100  $\mu$ M DEM in the olfactory regions (*arrowheads*) of day 4 larvae. H indicates the number of hours after DEM addition.

**Movie S2** DEM-induced GFP expression in *it567* and its sibling wild-type larvae. GFP induction by 100  $\mu$ M DEM in the olfactory regions (*arrowheads*) of homozygous *it567* larvae (right panel) or wild-type siblings (left panel) at 4 dpf. H indicates hours after DEM addition.