

ERRATUM

Transglutaminase 2 overexpression induces depressive-like behavior and impaired TrkB signaling in mice

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The image for Figure 2 of this paper was a copy of Figure 3. The correct version of Figure 2 and its legend appear below. The publisher regrets this error.

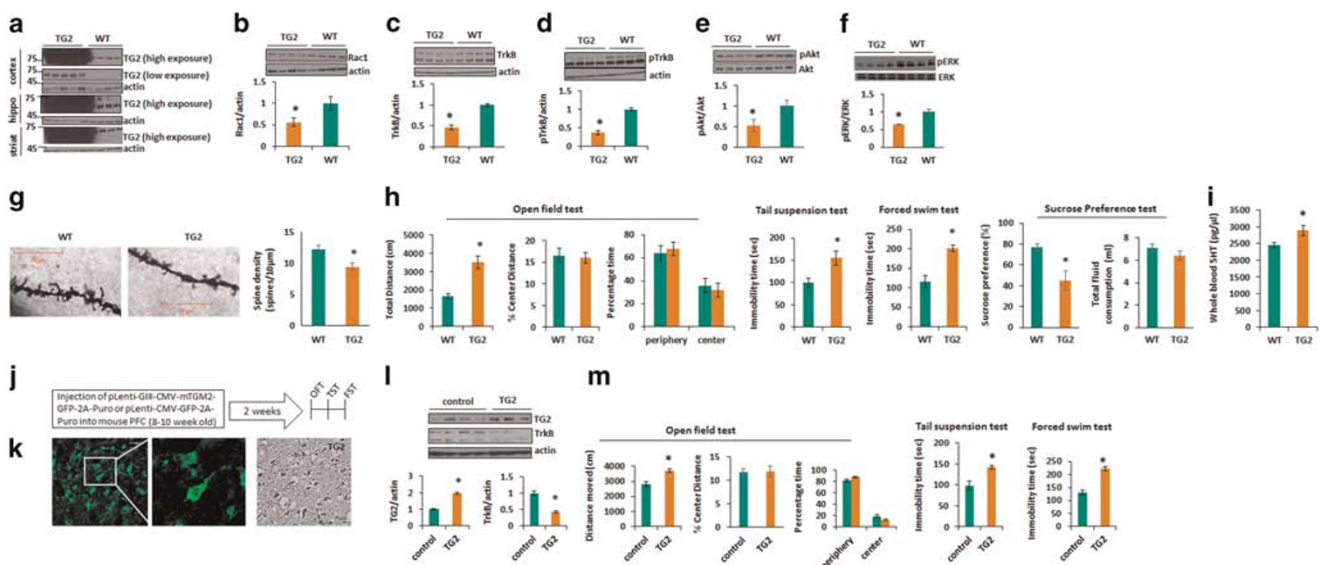


Figure 2. Type-2 transglutaminase (TG2) overexpression induces reductions in TrkB (tropomyosin-related kinase B) and Rac1 (RAS-related C3 botulinum toxin substrate 1) protein levels in the prefrontal cortex (PFC) and depressive-like behavior in mice. **(a)** The representative immunoblot data showing TG2 expression in the PFC (cortex), hippocampus (hippo) and striatum (striat) of male TG2-overexpressed (TG2) and wild-type (WT) mice. **(b)** Rac1 and **(c)** TrkB protein levels in the PFC of TG2 ($n=6$) and WT ($n=6$) mice. **(d)** Phosphorylated form (pTrkB) protein levels normalized to actin, **(e)** phosphorylation of Akt (pAkt) protein levels normalized to Akt and **(f)** phosphorylation of ERK (pERK) protein levels normalized to ERK in the PFC of male TG2 ($n=6$) and WT ($n=6$) mice. **(g)** (Left) Representative images of high-magnification z-stack projections of secondary branches of apical dendrites in the superficial layer and deep layers of PFC. (Right) Spine density from male WT ($n=25$ branches from six cells; $n=3$) and TG2 ($n=27$ branches from seven cells; $n=3$) mice. **(h)** (left) Distance traveled, % distance in center and time spent in the periphery and center area of the chamber in the open field test for WT ($n=10$) and TG2 ($n=10$) mice. (Center) The immobility time measured in tail suspension test (TST) and forced swim test for WT ($n=10$) and TG2 ($n=10$) mice. (Right) Preference for sucrose and total fluid consumption over 24 h (ml) measured in sucrose preference test for WT ($n=10$) and TG2 ($n=10$) mice. **(i)** High-performance liquid chromatography (HPLC) measurement of 5-HT in whole blood of WT ($n=6$) and TG2 ($n=6$) mice. **(j)** Schematic representation of experiment for lentiviral overexpression of TG2 into mouse PFC. **(k)** (left) Representative photographs of GFP-expressing neurons from the lentiviral TG2-injected mouse PFC. (Right) Representative image from 3,3'-diaminobenzidine (DAB) staining showing TG2 expression in the injection site of lentiviral TG2-administered mouse PFC. **(l)** (top) The representative immunoblot data showing TG2, TrkB and β -actin expression in the PFC of mice injected with control or TG2 lentiviral particles. (Bottom) TG2 and TrkB protein levels normalized to β -actin in the PFC of mice injected with control ($n=6$) or TG2 ($n=6$) lentiviral particles. **(m)** (left) Distance traveled, % distance in center and time spent in the periphery and center area of the chamber was calculated in the open field test for control ($n=8$) or TG2 lentivirus-injected ($n=8$) mice. The immobility time measured in (center) tail suspension test and (right) forced swim test for control ($n=8$) or TG2 lentivirus-injected ($n=8$) mice. The data are expressed as mean \pm s.e.m. * $P < 0.05$ vs WT (**b–f**, **h** and **i**) or control lentiviral-treated mice (**l** and **m**); Student's *t*-test.