Table X. Dopamine

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| --- | --- | --- | --- | --- | --- | --- |
| **Gene Knockout/**  **Overexpression\*** | **Background** | **Operant** | **2BC** | **DID** | **SIP** | **References** |
| D1A dopamine receptor (*Drd1*) | B6 |  | ↓ (limited, continuous access) |  |  | El Ghundi et al., 1998 [8] |
| D2 dopamine receptor  (*Drd2*) | B6 | ↓ (23 h) |  |  |  | Risinger et al., 2000 [15] |
|  | B6 males/females |  | ↓ ethanol-naive  — ethanol-sensitized |  |  | Palmer et al., 2003 [45] |
|  | B6 |  | ↓ |  |  | Thanos et al., 2005 [93] |
|  | B6 males/females |  | ↓ |  |  | Phillips et al., 1998 [132] |
| D2 long receptor | B6  B6 |  | ↓  ↑ KO, ↓ WT chronic stress | ↑ (4 h; males/females) |  | Delis et al., 2013 [281]  Bulwa et al., 2011 [238] |
| D2\* | B6 |  | ↓ WT, transient ↑ KO |  |  | Thanos et al., 2005 [93] |
|  |  |  |  |  |  |  |
| D3 dopamine receptor  (*Drd3*) | B6 | — (23 h) | — |  |  | Boyce-Rustay and Risinger, 2003 [47] |
|  | B6 |  | ↓ | ↓ (4 h) |  | Leggio et al., 2014 [298] |
| D4 dopamine receptor  (*Drd4*) | B6129/Ola × B6 |  | — |  |  | Falzone et al., 2002 [35] |
| Sodium-dependent dopamine transporter, DAT (*Slc6a3*) | B6 |  | — males  ↓ females |  |  | Savelieva et al., 2002 [37] |
|  | B6 |  |  |  | ↓ (40 min;  males/females) | Mittleman et al., 2011 [226] |
|  | B6 × 129Sv |  | ↑ 24% males  — females |  |  | Hall and Uhl, 2003 [51] |
| Synaptic vesicular amine transporter-2 (*Slc18a2*) | B6 × 129Sv |  | ↑ high concentrations; males  — females |  |  | Hall and Uhl, 2003 [51] |
| Dopamine β-hydroxylase (*Dbh*) | B6 × 129/SvEv |  | ↓ |  |  | Weinshenker et al., 2000 [20] |

–, ↓, ↑: no significant difference, decreased ethanol intake and/or preference, or increased ethanol intake and/or preference, respectively, in knockout (KO) or mice overexpressing D2\* *vs*. wildtype (WT) mice. Male mice were tested unless indicated otherwise. Deletion of the long form of D2 produces overexpression of the short relative to the long form. Ethanol intake in the two-bottle choice (2BC) tests was measured in 24-h sessions. Drinking session times for the other tests are indicated in parenthesis. DID, drinking in the dark; SIP, scheduled-induced polydipsia. Recommended mouse protein and gene (in italics) names are from Uniprot. B6 refers to C57BL/6J mice.