**Table. 1. Example of Deep-learning Training Data**

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| --- | --- | --- | --- |
| tissue | NPs | NPRs | TFs |
| Head | *Tk* | *TkR99D* | *crp, onecut, trx* |
| Head | *sNPF* | *sNPF-R* | *Atac3, Cf2, CG16779, CG44247, CrebB, crp, hth, luna, Mef2, onecut, Psi, Rbp6, Rfx, sima, sr, svp, Tet, Trf2* |
| Body | *AstA* | *AstA-R1* | *CG16779, Lim3, onecut* |
| Body | *AstC* | *AstC-R1* | *Dim* |
| Body | *AstC* | *AstC-R2* | *Dim* |
| Body | *CCHa1* | *CCHa1-R* | *dimm, Lim3* |
| Body | *CNMa* | *CNMaR* | *Atf3, CHES-1-like, cnc, crc, CrebB, E2f1, foxo, Hnf4, Mef2, REPTOR-BP, SREBP, svp, Trf2, Xbp1* |
| Body | *Dh31* | *Dh31-R* | *CG16779, dimm, Lim3, onecut, sr, tup* |
| Body | *Dh31* | *hec* | *acj6, CG16779, Lim3* |
| Body | *Dh44* | *Dh44-R1* | *CG16779, CG4328, Lim3, onecut, otp, Psi, sr* |
| Body | *Dh44* | *Dh44-R2* | *Lim3* |
| Body | *ETH* | *ETHR* | *Dim* |
| Body | *FMRFa* | *FMRFaR* | *Sr* |
| Body | *Hug* | *PK2-R1* | *Rfx* |
| Body | *Ilp6* | *InR* | *CHES-1-like, cnc, crc, CrebB, foxo, Hnf4, kay, srp, svp, Trf2* |
| Body | *Lst* | *PK1-R* | *foxo, Hnf4* |
| Body | *Proc* | *Proc-R* | *Atf6, CG16779, CG44247, CHES-1-like, crc, E2f1, NfI, sr* |
| Body | *Ptth* | *Tor* | *Rel* |
| Body | *sNPF* | *sNPF-R* | *acj6, Atf6, CG16779, dimm, ftz-f1 ,HGTX, kn, Lim3, onecut, pdm3, sr* |
| Antenna | *Crz* | *CrzR* | *Grh* |
| Antenna | *Dh31* | *Dh31-R* | *bru3, FoxP, onecut, Trf2* |
| Gut | *Acp26Aa* | *SPR* | *E2f2* |
| …. | *….* | *….* | *….* |
| Gut | *Tk* | *TkR99D* | *Ets96B* |