Table S2. Orthologues of *mll* and SET domain genes from yeast to human (Modified from Sun, 2008). Isoforms in fish species were determined based on the combined information in the Genbank database and syntheny analysis with *Genomicus*.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***S. cerevisiae*** | ***C. elegans*** | ***D. melanogaster*** | ***D. rerio*** | ***O. latipes*** | ***G. aculeatus***  | ***T. rubripes*** | ***T. nigroviridis*** | ***X. laevis*** | ***G. gallus*** | ***M. musculus*** | ***H. sapience*** | **HMT activity** |
|  | ***tag-350*** | ***trr*** | ***mll2*** | ***mll2*** | ***mll2*** | ***mll2*** | ***mll2*** | ***mll2*** | ***mll2*** | ***Mll2*** | ***MLL2*** | **H3K4** |
| ***mll3a*** | ***mll3a*** | ***mll3a*** | ***mll3a*** | ***mll3a*** | ***mll3*** | ***mll3*** | ***Mll3*** | ***MLL3*** |
| ***mll3b*** | ***mll3b*** | ***mll3b*** | ***mll3b*** | ***mll3b*** |
|  | ***trx*** | ***mll4a*** | ***mll4a*** | ***mll4a*** | ***mll4a*** | ***mll4a*** | ***mll4*** | **no data** | ***Mll4*** | ***MLL4*** |  |
| ***mll4b*** | ***mll4b*** | ***mll4b*** | ***mll4b*** | ***mll4b*** |
| ***mll*** | ***mll*** | ***mll*** | ***mll*** | ***mll1a*** | ***mll*** | ***mll*** | ***Mll*** | ***MLL*** | **H3K4** |
| ***mll1b*** |
|  | ***set-24*** | ***GC9007*** | ***mll5*** | ***mll5*** | ***mll5*** | ***mll5*** | ***mll5*** | ***mll5*** | ***mll5*** | ***Mll5*** | ***MLL5*** |  |
| ***set-9*** |
| ***set-26*** |
| ***SET1*** | ***set-2*** | ***CG40351*** | ***setd1a*** | ***setd1a*** | ***setd1a*** | ***setd1a*** | ***setd1a*** | ***setd1a*** | **no data** | ***Setd1a*** | ***SETD1A*** | **H3K4** |
| ***setd1ba*** | ***setd1ba*** | ***setd1ba*** | ***setd1ba*** | ***setd1ba*** | ***setd1b*** | ***setd1b*** | ***Setd1b*** | ***SETD1B*** |
| ***setd1bb*** | ***setd1bb*** | ***setd1bb*** | ***setd1bb*** | ***setd1bb*** |