



Figure 6. Imprinted expression is regulated by gametic DMRs (G-DMR). (*Left*) The effect of deleting the gametic DMR from the imprinted chromosome (green). (*Right*) The effect of deleting the G-DMR from the nonimprinted chromosome (yellow). In many imprinted clusters (e.g., *Igf2r*, *Kcnq1*, and *Dlk1*), experimental deletion of the G-DMR only affects the chromosome carrying the nonimprinted G-DMR. This results in a loss of repression of the imprinted protein-coding mRNA genes (IG) and a gain of repression of the imprinted lncRNA gene (IG-NC). Note that in some imprinted clusters (*Igf2* and *Pws*) that are not illustrated here, the methylated G-DMR appears also to be required for expression of some of the imprinted mRNAs in *cis*. del, deleted DNA; G-DMR, gametic differentially DNA-methylated region; NG, nonimprinted gene; arrow, expressed allele; slashed circle, repressed allele; imprint, epigenetic modification leading to a change in gene expression in *cis*.