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We show that for any Cayley configuration A of codimension two, a sufficiently high derivative of any rational function solution of the associated A -hypergeometric system is a toric residue. This follows from the fact that the dimension of the space of rational A -hypergeometric functions with homogeneities in the Euler-Jacobi cone of A equals 1 and is spanned by an explicit toric residue we read from the configuration and the homogeneity. This gives a geometric interpretation of monodromy invariant A -hypergeometric functions for codimension two configurations. (Received February 08, 2008)