Abstract

On the real line, the Dunkl operators are differential-difference operators associated with the reflection group $\mathbb{Z}_2$ on $\mathbb{R}$. In this paper we obtain analog theorems of Welland for the Riesz potentials associated with the Dunkl operator on the real line. We get necessary and sufficient conditions on the parameters for the boundedness of the Riesz potential associated with the Dunkl operator on $\mathbb{R}$ from the spaces $L_{p,\alpha}(\mathbb{R})$ to the spaces $L_{q,\alpha}(\mathbb{R})$.