NG2 cells, or polydendrocytes, are defined as glial cells that express the NG2 proteoglycan and represent a fourth major glial cell population in the mammalian central nervous system. They are morphologically, antigenically, and functionally distinct from mature astrocytes, oligodendrocytes, and microglia. Although they are most often equated with oligodendrocyte progenitor cells, they exhibit some properties that are not commonly associated with those of progenitor cells that generate myelinating cells [1)].

Electrophysiological studies indicate that polydendrocytes receive synaptic input from neurons, suggesting that they are integrated in the neural network [2)].

1)
Nishiyama A. Polydendrocytes: NG2 cells with many roles in development and repair of the CNS. Neuroscientist. 2007 Feb;13(1):62-76. Review. PubMed PMID: 17229976.
2)
Nishiyama A, Komitova M, Suzuki R, Zhu X. Polydendrocytes (NG2 cells): multifunctional cells with lineage plasticity. Nat Rev Neurosci. 2009 Jan;10(1):9-22. doi: 10.1038/nrn2495. Review. PubMed PMID: 19096367.