# Molecular Interactions and Expression of PD-1 and PD-L1

## PD-1
- **Ligands**
  - PD-L1
  - PD-L2
- **Expression**
  - High expression on tumor-infiltrating lymphocytes
  - Activated CD4 and CD8 T cells
  - Regulatory T cells
  - NK T cells
  - B cells
  - Monocytes
  - Dendritic cells

## PD-L1
- **Ligands**
  - PD-1
  - B7-1 (connects to the CD28/CTLA-4 pathway)
- **Expression**
  - Tumor cells
  - All cell types and tissues (mRNA)

---