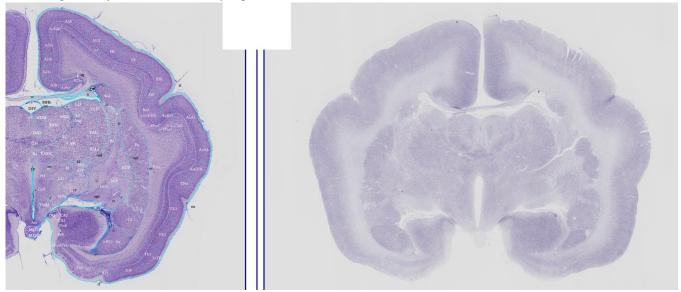
Prompt:

Assume you are a genetic and brain image expert. This picture is the image of mammalian brain from marmoset. The left side shows the Nissl stained sections and atlas id of the brain regions, the brain has been parcellated into regions, the region name is in white text on the image, The right side is stained for RNA-rich regions of the expression of gene SLC18A3. Please identify the regions which SLC18A3 is richly expressed based on the location and stain intensity. Point out the region id of the SLC18A3 richly expressed area.



GPT-4V:

Based on the provided image and comparing the Nissl-stained section with the RNA-stained section for the gene SLC18A3 expression:

The regions with rich expression of SLC18A3, as indicated by a darker stain on the right side, seem to align with the following areas (using the region IDs from the left side):

- **MDC**: Mediodorsal nucleus of the thalamus, central part
- **LH**: Lateral hypothalamic area
- **PH**: Posterior hypothalamic nucleus
- **ZI**: Zona incerta
- **CA3**: Field CA3 of hippocampus
- **CA2**: Field CA2 of hippocampus
- **CA1**: Field CA1 of hippocampus
- **ProS**: Prosubiculum
- **DG**: Dentate gyrus

Please note that for a comprehensive and accurate analysis, using a high-resolution image and specialized imaging software would be ideal.

Reference answer:

Manually checked SLC18A3's rich expression area: CA1, CA2, ProS, S, PrS, A29d, A23a, A23b, A3o