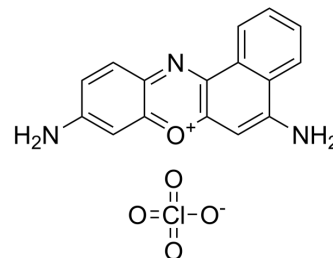


Cresyl Violet perchlorate

| | |
|---------------------------|---|
| Cat. No.: | HY-101889 |
| CAS No.: | 41830-80-2 |
| Molecular Formula: | C ₁₆ H ₁₂ ClN ₃ O ₅ |
| Molecular Weight: | 361.74 |
| Target: | Fluorescent Dye |
| Pathway: | Others |
| Storage: | Please store the product under the recommended conditions in the Certificate of Analysis. |



SOLVENT & SOLUBILITY

In Vitro

DMSO : 250 mg/mL (691.10 mM; Need ultrasonic)

| Concentration | Mass | | | |
|---------------|-----------|------------|------------|--|
| | 1 mg | 5 mg | 10 mg | |
| 1 mM | 2.7644 mL | 13.8221 mL | 27.6442 mL | |
| 5 mM | 0.5529 mL | 2.7644 mL | 5.5288 mL | |
| 10 mM | 0.2764 mL | 1.3822 mL | 2.7644 mL | |

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Cresyl Violet perchlorate is a red fluorescent stain, which can be used to stain neurons.

In Vitro

The estimated total number of SG neurons is 27,485±3251 and 26,705±1823 in the PV and Cresyl Violet perchlorate (CV) stained sections, respectively. There is no significant difference between them (p=0.552). Therefore, Cresyl Violet perchlorate staining is simpler and more cost effective when estimates neuronal number. Although PV stains spiral ganglion neurons (SGNs) with a greater intensity and provides a functional status, its tedious protocol limits its use for quantification. Total RC volume is estimated using probe and it is found that an average RC volume of 2.162±0.35 mm³ and 1.82±0.33 mm³ in Cresyl Violet perchlorate stained and PV immunostained sections, respectively. Volume of neurons is estimated using nucleator probe and it is 3487.63±951 μm³ and 3740.1±784 μm³ in CV stained and PV immunostained sections, respectively. Similarly, volume of neuronal nucleus is also estimated using nucleator probe and it is found to be 131.68±50 μm³ and 126.51±33 μm³ in CV stained and PV immunostained sections, respectively^[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Cell Assay ^[1]

Cochlear sections containing SGNs are placed in 24 wells plates containing PBS (pH 7.4) and stored at 4°C. The sections are then used for Cresyl Violet perchlorate (CV) and immunohistochemical (IHC) staining. Every 7th section is stained with Cresyl Violet perchlorate (1%), dehydrated with ascending grades of alcohol, cleared with xylene, mounted with DPX and observed under microscope. Approximately 12-13 Cresyl Violet perchlorate stained sections from each specimen are used for stereology. None of these cases show any histopathological changes under the light microscope. Estimation of the total volume of the Rosenthal canal (RC), total number of SGNs (optical fractionator probe) and the volume of the soma and their nucleus (nucleator probe) is done with software^[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Kaur C, et al. Comparison of unbiased stereological estimation of total number of cresyl violet stained neurons and parvalbumin positive neurons in the adult human spiral ganglion. J Chem Neuroanat. 2017 Jun 23. pii: S0891-0618(17)30037-6.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA