



Neuron Specific Enolase (NSE) Data Sheet

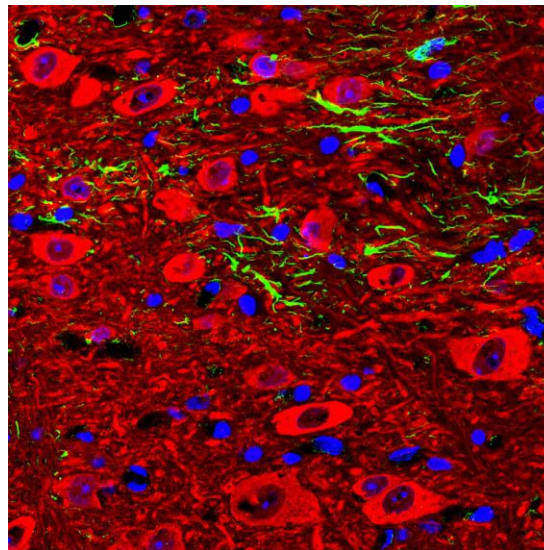
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|----------------------------|---|----------------------------|--|
| Catalog Number: | CH22126 | Host: | Chicken |
| Product Type: | Chicken Polyclonal | Species Reactivity: | Human, Rat, and Mouse |
| Immunogen Sequence: | Recombinant full length human NSE expressed in and purified from <i>E. coli</i> . | Format: | Antibody is supplied as an aliquot of serum. |
| Applications: | Immunohistochemistry: 1:500 Immunofluorescent: 1:500 Immunohistochemistry: 1:500 Western Blot: 1:2,000 | | |
| | Dilutions listed as a recommendation. Optimal dilution should be determined by investigator. | | |
| Storage: | Antibody can also be aliquotted and stored frozen at -20° C in a manual defrost freezer for six months without detectable loss of activity. The antibody can be stored at 2° - 8° C for 1 month without detectable loss of activity. Avoid repeated freeze-thaw cycles. | | |

Application Notes

Description/Data:

Neuron specific enolase (NSE) is an enzyme which catalyzes the conversion of 2-phosphoglycerate to phosphoenolpyruvate in the glycolytic pathway, and also the reverse reaction in gluconeogenesis. It is one of three mammalian enolases, which are also known as ENO1, ENO2, and ENO3 or alternately as α , β and γ enolase. The three enolases are related in protein sequence, and have different cell type specific expression patterns, so that antibodies to them are useful cell type specific markers. NSE is also known as enolase 2 or γ enolase and is heavily expressed in neuronal cells. Enolase 1 is also known as α enolase and as non-neuronal enolase. The third enolase, enolase 3 or β enolase, is expressed in muscle cells. Perhaps not surprisingly, since neurons require a great deal of energy, they are very rich in glycolytic enzymes such as GAPDH and NSE. Antibodies to this protein are therefore useful to identify neuronal cell bodies, and also developing neuronal lineage and neuroendocrine cells. Release of NSE from damaged neurons into CSF and blood has also been used as a biomarker of neuronal injury, and elevated NSE levels in blood and tissues are seen associated with various kinds of neuroendocrine derived tumors.

Image: Immunofluorescent analysis of a section of adult mouse cerebellar dentate nucleus stained with chicken pAb to neuron specific enolase (NSE), CH22126, dilution 1:3,000 in red. The section was costained with rabbit pAb to GFAP dilution 1:5,000 in green. The blue is Hoechst staining of nuclear DNA.



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