

Charged MTS reagents

Product Description

<p>MTSEA 2-Aminoethyl MethaneThioSulfonate Hydrobromide MW 236.15, C₃H₉NO₂S₂.HBr This reagent would fit inside a cylinder about 0.6nm in diameter and 1nm in length (Akabas 1992). Half-life (pH7.0, 20°C): ca 12 min, Half-life (pH6.0, 20°C): ca 92 min, Half-life (pH7.0, 4°C): ca 116 min (Karlin 1998)</p>	UP99618	100mg	500mg
<p>MTSEA biotin 2-((biotinoyl)amino)ethyl MethaneThioSulfonate MW 381.52, C₁₃H₂₃N₃O₄S₃ This reagent would fit inside a cylinder about 0.6nm in diameter and 1nm in length (Akabas 1992). Half-life (pH7.0, 20°C): ca 12 min, Half-life (pH6.0, 20°C): ca 92 min, Half-life (pH7.0, 4°C): ca 116 min (Karlin 1998) Solubility in water >10% at 20°C</p>	UPR5752	10mg	50mg
<p>MTSES Sodium (2-sulfonatoethyl) MethaneThioSulfonate MW 236.18, C₃H₇NO₅S₃.Na This reagent would fit inside a cylinder about 0.6nm in diameter and 1nm in length (Akabas 1992). Half-life (pH7.0, 20°C): ca 370 min (Karlin 1998)</p>	U0350	100mg	500mg
<p>MTSET (2-(trimethylammonium)ethyl)MethaneThioSulfonate bromide MW 278.24, C₆H₁₆NO₂S₂.Br This reagent would fit inside a cylinder about 0.6nm in diameter and 1nm in length (Akabas 1992); Half-life (pH7.0, 20°C): ca 11.2 min, Half-life (pH6.0, 20°C): ca 55 min (Karlin 1998)</p>	U0351	100mg	500mg

Also available in kit format (100mg of MTSEA, MTSES, and MTSET) on inquire

General Information

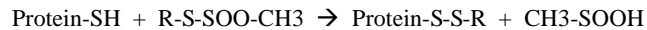
- The development of alkylthiosulfonates has proved to be extremely useful in the mapping of membrane proteins. The use of these reagents when combined with site-specific introduction of cysteines can provide information about the structure and function of ion channels and transport proteins, as well as enzymes and receptors.
- The chemical modification of an introduced cysteine by a charged MTS reagent may produce a measurable change in the function of the ion channel/transport protein, which can be measured by electrical recording or isotope flux. Such data give information concerning the time-course, state dependence and membrane-sidedness of the accessibility of the cysteine (Akabas 1992, Stauffer 1994). This is referred to as substituted-cysteine-accessibility method (SCAM) (Akabas 1994).

Contact your local distributor

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FT-UP99618(MTSreagents)

- MTS reagents have proven favorable when compared to traditional reagents (iodoacetates, maleimides, and organomercurials) due to the facility with which cysteine residues are stoichiometrically alkylated under mild conditions (Kenyon 1977). This is a specific and rapid process by which cysteine sulfhydryls are converted to a disulfide. The reaction pathway is potentially reversible upon the addition of thiols such as DTT (#UP28425).



- The biotinylated MTSE UPR5752 may be easily detected with (strept)avidin as with:

Streptavidin, peroxidase conjugated UP395880, 1mg
Streptavidin, phosphatase alkaline conjugated UP518490, 1mg

Related documents:

[FT-UP51558](#) (strept)avidin reagents

Other Information

Literature

Akabas M.H., Stauffer D.A., XU M. and Karlin A., *Science* 1992, 258, 307-310
Karlin A. and Akabas M.H., in *Methods Enzymol.* 1998, 293, 123-136
Stauffer D.A. and Karlin A., *Biochem* 1994, 33, 6840-6849

Akabas M.H., Kaufman C., Archdeacon P., and Karlin A., *Neuro* 1994, 13, 919-927.
Kenyon G.L. and Bruice T.W., in *Methods Enzymol.*, 1977, 407-430

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