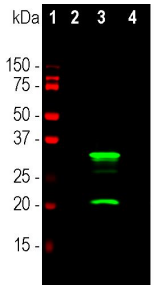
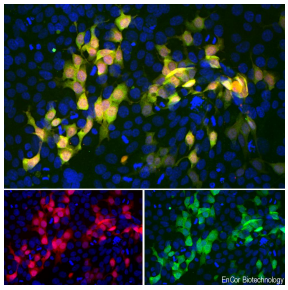
Product Data Sheet: td-Tomato

Cat. No:	MAB-94632
Conjugate:	Unconjugated
Size:	100 ug
Clone:	T5A6
Concentration:	1mg/mL
Host:	Ms
Isotype:	IgG1
Immunogen:	length recombinant td Tomato protein expressed in and purified from E. coli
Reactivity:	All Species
Applications:	Western blot: 1:1,000 Immunofluorescence: 1:250 Immunocytochemistry: 1:250 Immunohistochemistry: 1:250
Molecular Weight:	28kDa
Purification:	Aff. Pur.
Background:	The td-Tomato protein is derived from DsRed, a red fluorescent protein from so-called disc corals of the genus Discosoma. DsRed is similar in size and properties to GFP, but, obviously, produces a red rather than a green fluorochrome. The original DsRed was engineered extensively in the Tsien lab to prevent it from forming tetramers and dimers and to modify and improve the spectral properties (1-3). Several further cycles of mutation, directed modification and evolutionary selection produced td-Tomato , which has an excitation maximum at 587 nm and and emission maximum at 610 nm (4).
Form:	Liquid
Buffer:	Purified at 1mg/mL in 50% PBS, 50% glycerol, 5mM NaN3
Storage:	Shipped on ice. Store at 4°C. For long term storage, leave frozen at -20°C. Avoid freeze / thaw cycles.



Western blot analysis of various HEK293 cell lysates using mouse mAb to td-Tomato dilution 1:5,000, in green. [1] protein standard, [2] untransfected HEK293 lysate, [3] lysate of HEK293 cells transfected with td-Tomato-HA construct, and [4] lysate of HEK293 cells transfected with eGFP



Immunofluorescent analysis of HEK293 cells stably transduced with a lentiviral vector expressing td-Tomato-HA construct (red) and stained with mouse mAb to td-Tomato, T5A6, dilution 1:500 in green. The blue is Hoechst staining of nuclear DNA. The T5A6 antibody reveals the td-Tomato protein

construct. As expected from our epitope mapping data, T5A6 does not recognize eGFP. The major band at about 28kDa corresponds to the full length td-Tomato protein and the lower band at about 21kDa is an td-Tomato breakdown product.

expressed only in transduced cells which appear golden in color. Untransduced cells expressing no td-Tomato are not recognized by the T5A6 antibody and so only their nuclei are visible.

References

1. Matz MV, et al. Fluorescent proteins fromnonbioluminescent Anthozoa species. Nat.Biotechnol. 17:969-73 (1999)
2. Baird GS, Zacharias DA, Tsien RY.Biochemistry, mutagenesis, and oligomerizationof DsRed, a red fluorescent protein from coral.
PNAS 97:11984-9 (2000).
3. Chalfie M, et al. Green fluorescent protein asa marker for gene expression. Science263:802-5 (1994).
4. Gross LA. et al. The structure of thechromophore within DsRed, a red fluorescentprotein from coral. PNAS 97:11990-5 (2000).
5. Heikal AA. et al. Molecular spectroscopy anddynamics of intrinsically fluorescent proteins:coral red (dsRed) and yellow (Citrine). PNAS97:11996-2001 (2000).
6. Shaner NC. et al. Improved monomeric red,orange and yellow fluorescent proteins derived from Discosoma sp. red fluorescent protein.Nat. Biotech. 22:1567-72 (2004