

DESCRIPTION	
Species Reactivity	Human
Specificity	Detects human MSX2 in ELISAs. In direct ELISAs, no cross-reactivity with recombinant human MSX1 is observed.
Source	Monoclonal Mouse IgG ₁ Clone # 786607
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human MSX2 Ala2-Thr132 Accession # P35548
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

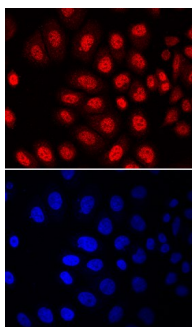
APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

	Recommended Concentration	Sample
Immunocytochemistry	8-25 µg/mL	See Below

DATA

Immunocytochemistry



MSX2 in SK-BR-3 Human Cell Line. MSX2 was detected in immersion fixed SK-BR-3 human breast cancer cell line using Mouse Anti-Human MSX2 Monoclonal Antibody (Catalog # MAB7917) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red, upper panel; Catalog # NL007) and counterstained with DAPI (blue, lower panel). Specific staining was localized to nuclei. View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

MSX2, also known as HOX-8, is an approximately 35 kDa homeobox transcription factor that is a downstream target of canonical Wnt signaling. MSX2 plays an important role in the development of mineralized tissues including bone, cartilage, and teeth. It is upregulated in atherosclerotic plaques and promotes the calcification of vascular smooth muscle cells during inflammation. MSX2 suppresses the adipocytic differentiation of multipotent mesenchymal cells. MSX2 acts in mammary gland development and the initiation of female fetal germ cell meiosis. It promotes tumorigenesis of breast and pancreatic carcinomas but inhibits the survival and invasiveness of melanoma cells. Human MSX2 contains one homeodomain (aa 143-201). Within aa 1-132, human MSX2 shares 87% aa sequence identity with mouse and rat MSX2.