

DESCRIPTION

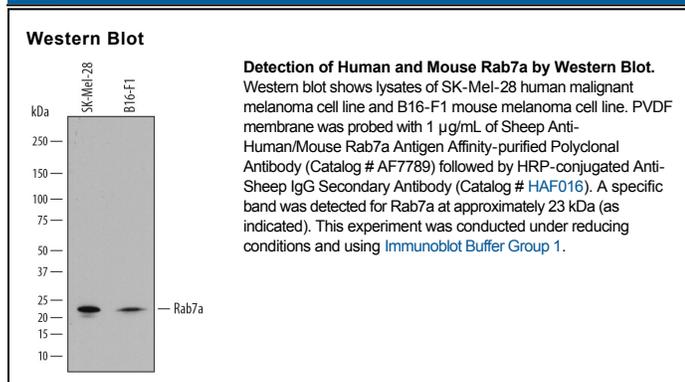
Species Reactivity	Human/Mouse
Specificity	Detects human and mouse Rab7a in direct ELISAs and Western blots. In direct ELISAs, less than 5% cross-reactivity with recombinant human (rh) Rab9a and rhRab9b is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human Rab7a Thr2-Ser204 Accession # P51149
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
Western Blot	1 µg/mL	See Below

DATA



PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.2 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

Rab7a (Ras-related protein Rab 7A; also RAB7) is a 22-24 kDa member of the Rab family, Small GTPase superfamily of proteins. It is widely expressed, and found in cells diverse as skeletal muscle, neurons, osteoclasts and macrophages. Rab7a plays a key role in the formation of phagolysosomes. In particular, Rab7a-GTP becomes associated with early phagosomes. The GTP form of Rab7a first recruits RILP, a molecule that interacts with ORPL1 and promotes the formation of a dynactin:dynein complex. This complex now initiates the movement of the phagosome along microtubules, where it fuses with lysosomes and endosomes at select points, creating phagolysosomes. Human Rab7a is 207 amino acids (aa) in length. It contains multiple Rab family and subfamily motifs, and concludes with a C-terminal CXC prenylation sequence (aa 205-207). There is one utilized phosphorylation site at Tyr183. Full-length human and mouse Rab7a have identical aa sequences. Notably, however, point mutations with single aa changes are noted in both species. By contrast, human Rab7a and Rab7b share less than 50% aa sequence identity, each representing the product of distinct genes.